

Exhibit 20

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1 UNITED STATES DISTRICT COURT
2 SOUTHERN DISTRICT OF NEW YORK
3
4 SECURITIES AND EXCHANGE)
COMMISSION,)
5)
Plaintiff,)
6)
vs.) Case No.
7) 20-Civ-10832 (AT) (SN)
RIPPLE LABS, INC., BRADLEY)
8 GARLINGHOUSE, and CHRISTIAN)
A. LARSEN,)
9)
Defendants.)
10)
11
12
13

14 HIGHLY CONFIDENTIAL
15 VIDEO-RECORDED DEPOSITION OF
16 M. LAURENTIUS MARAIS
17 New York, New York
18 Tuesday, December 21, 2021
19
20
21
22

23 Reported Stenographically By:
PATRICIA A. BIDONDE
24 Registered Professional Reporter
Realtime Certified Reporter
25 JOB No. 211220PBI

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December 21, 2021
9:17 a.m.

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Video-Recorded Deposition of M.
LAURENTIUS MARAIS, held at the offices
of Debevoise & Plimpton, 919 Third
Avenue, New York, New York, before
Patricia A. Bidonde, Stenographer,
Registered Professional Reporter,
Realtime Certified Reporter, Certified
eDepoze Court Reporter, Notary Public of
the States of New York, New Jersey, and
Connecticut.

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25 - - -

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1 IT IS HEREBY STIPULATED AND
2 AGREED, by and between the attorneys for
3 the respective parties, that all
4 objections, except as to the form of the
5 questions, shall be reserved to the time
6 of the trial.

7 IT IS FURTHER STIPULATED AND
8 AGREED that the within examination may
9 be signed and sworn to before any Notary
10 Public with the same force and effect as
11 if signed and sworn to before the court.

12 IT IS FURTHER STIPULATED AND
13 AGREED that the filing of the original
14 transcript of the examination is waived.
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2 P R O C E E D I N G S

3 - - -

4 THE VIDEOGRAPHER: This is the
5 video-recorded deposition of M. Laurentius
6 Marais, in the matter of Securities and
7 Exchange Commission versus Ripple Labs, Inc.,
8 Bradley Garlinghouse, and Christian A.
9 Larsen, Case Number 20 Civ. 10832 (AT) (SN).

10 This deposition is being held at
11 the offices of Debevoise & Plimpton, 919
12 Third Avenue, New York, New York. Today's
13 date is December 21, 2021. The time on the
14 video monitor is 9:16 a.m.

15 My name is Christian Bidonde, I am
16 the Legal Video Specialist with Gradillas
17 Court Reporters, located at 400 North Brand
18 Boulevard, Suite 950, Glendale, California.

19 Would counsel and all present
20 please voice identify themselves.

21 MR. SYLVESTER: My name is Mark
22 Sylvester. I am for the plaintiff, the SEC.
23 I'm here with my colleague Eugene Canjels.

24 MR. FIGEL: Reid Figel from Kellogg
25 Hansen with Gavan Gideon representing Ripple

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1 Labs.

2 MR. SYLVESTER: Justin Ward from
3 Paul, Weiss, Rifkind, Wharton & Garrison on
4 behalf of Christian Larsen and joined by my
5 colleague Emily Glavin.

6 MR. LOPEZ: Jorge Bonilla Lopez
7 from Cleary Gottlieb on behalf of defendant
8 Bradley Garlinghouse.

9 MR. SYLVESTER: There may be other
10 of our colleagues. Sometimes we just put the
11 names on the record so that we don't have to
12 work through everyone if that's agreeable.
13 Okay.

14 THE VIDEOGRAPHER: Would the
15 certified stenographer please swear in the
16 deponent.

17 M. L A U R E N T I U S M A R A I S, called
18 as a witness, having been duly sworn by
19 a Notary Public, was examined and
20 testified as follows:

21 EXAMINATION BY

09:18:53 22 MR. SYLVESTER:

09:18:53 23 Q. Could you please state your name
09:18:55 24 for the record.

09:18:55 25 A. M. Laurentius Marais. The spelling

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09:19:13 1 is L-a-u-r-e-n-t-i-u-s. Marais is M-a-r-a-i-s.

09:19:13 2 Q. And, again, I'm Mark Sylvester.

09:19:13 3 I'm here with the plaintiff in this case, the SEC,

09:19:13 4 with my colleague Eugene in the room. Other of my

09:19:18 5 SEC colleagues are joining us remotely.

09:19:22 6 You've had your deposition taken

09:19:23 7 before. Is that right, Mr. Marais?

09:19:26 8 A. Yes.

09:19:26 9 Q. Is there anything that would

09:19:27 10 prevent you from testifying fully and truthfully

09:19:30 11 here today?

09:19:30 12 A. Nothing that I'm aware of.

09:19:32 13 Q. Were you retained to provide expert

09:19:34 14 services in this case?

09:19:35 15 A. Yes.

09:19:35 16 Q. Who retained you?

09:19:37 17 A. I understand that my retention is

09:19:41 18 on behalf of Ripple Labs.

09:19:47 19 Q. Did any other defendant in this

09:19:49 20 case retain you?

09:19:50 21 A. I can't absolutely rule it out, but

09:19:53 22 I've had no contact with any other defendant.

09:19:57 23 And, to the best of my knowledge, my retention is

09:19:58 24 by Ripple Labs.

09:20:00 25 Q. Okay. On occasion today, when I

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09:20:02 1 use the word "Ripple," I'll be referring to Ripple
09:20:06 2 Labs, the defendant in this case. Okay?

09:20:08 3 A. I'll try to keep that in mind.

09:20:10 4 Q. Are you familiar with the term XRP?

09:20:12 5 A. Yes.

09:20:13 6 Q. What is XRP?

09:20:17 7 A. XRP is a kind of cryptocurrency.

09:20:21 8 Q. Are you familiar with the term
09:20:23 9 "digital asset"?

09:20:25 10 A. I've come across the term. I'm not
09:20:32 11 sure I can define it for you in a comprehensive
09:20:44 12 way.

09:20:45 13 Q. To the best of your knowledge, is
09:20:45 14 XRP a digital asset?

09:20:45 15 A. In my layperson's interpretation of
09:20:48 16 that term -- in other words, not as an expert term
09:20:50 17 of art -- I would consider it a digital asset.

09:21:05 18 (Exhibit LM-1, Rebuttal Expert
09:21:05 19 Report of M. Laurentius Marais, marked for
09:21:06 20 identification, as of this date.)

09:21:06 21 Q. Dr. Marais, I'm going to hand you
09:21:08 22 what's been marked -- premarked LM-1.

09:21:19 23 Dr. Marais, is exhibit LM-1 the
09:21:23 24 expert rebuttal report that you submitted in this
09:21:27 25 case?

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09:21:27 1 A. It appears to be, yes.

09:21:28 2 Q. Does your signature appear on page

09:21:32 3 17 of LM-1?

09:21:34 4 A. It does. I see it there.

09:21:36 5 Q. Okay. In LM-1, you are offering

09:21:39 6 opinions on the opinions offered by Dr. [REDACTED]

09:21:42 7 [REDACTED] in his expert report in this case. Is that

09:21:47 8 right?

09:21:48 9 A. That's fair.

09:21:49 10 Q. Is Attachment A to LM-1 your CV?

09:21:52 11 A. Yes.

09:21:54 12 Q. Looking at your CV now, do you see

09:21:57 13 any inaccuracies?

09:22:09 14 A. (Document review.)

09:22:09 15 MR. FIGEL: Objection to form.

09:22:11 16 A. I don't see any. And I was -- I'm

09:22:13 17 not aware of any.

09:22:18 18 Q. Does the education section of your

09:22:22 19 CV accurately list the degrees you earned?

09:22:30 20 A. Yes.

09:22:31 21 Q. Have you had any formal education

09:22:35 22 after 1985 that is not listed here?

09:22:41 23 A. Other than traffic school, no.

09:22:43 24 Q. Your CV lists your membership in a

09:22:52 25 number of associations. Is that right?

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09:22:55 1 A. Yes.

09:22:55 2 Q. Do any of the associations of which
09:22:58 3 you're a member have any relationship with any
09:23:00 4 defendant in this case?

09:23:05 5 A. None that I'm aware of, but these
09:23:12 6 associations are so broad in their range of
09:23:17 7 activity and interest that I can't rule it out.

09:23:19 8 They are membership associations,
09:23:22 9 and it's entirely possible that people with an
09:23:26 10 interest in this litigation in some manner are
09:23:28 11 members of these organizations. So I suppose that
09:23:31 12 would be a kind of association, which I'm not
09:23:36 13 aware of but can't rule out.

09:23:44 14 Q. Have you ever held any professional
09:23:47 15 licenses?

09:23:48 16 A. No.

09:23:48 17 Q. Have you ever been the subject of
09:23:49 18 any disciplinary action related to your
09:23:54 19 professional activities?

09:23:54 20 A. None that ever came to my
09:23:56 21 attention.

09:23:57 22 Q. Dr. Marais, you've served as an
09:24:03 23 expert witness prior to this case. Is that right?

09:24:06 24 A. I have.

09:24:06 25 Q. When was the very first occasion

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09:24:08 1 you were retained as an expert witness?

09:24:10 2 MR. FIGEL: Objection.

09:24:10 3 You can answer.

09:24:11 4 A. I'm not able to answer that without
09:24:18 5 delving into dusty archive at this point. It
09:24:23 6 would have been in the -- roughly, though -- in
09:24:28 7 the mid-1990s when I was retained as a designated
09:24:32 8 expert. I did some expert work as a confidential
09:24:37 9 consultant on other occasions prior to that.

09:24:41 10 Q. When you say a "designated expert,"
09:24:45 11 do you mean a testifying expert witness?

09:24:48 12 A. I mean -- that's really what I
09:24:50 13 mean, somebody who provided live testimony.

09:24:52 14 Q. So between the mid-'90s and now,
09:24:55 15 approximately how many times have you been
09:24:56 16 retained as an expert witness to testify?

09:24:58 17 A. That's a number I've never
09:25:03 18 calculated and don't have any need in the ordinary
09:25:07 19 course of business to keep a record of.

09:25:10 20 So at best, I can give you my
09:25:13 21 impressionistic estimate, which is at least 200
09:25:21 22 times and possibly -- possibly, depending on how
09:25:27 23 one counts, 400 times.

09:25:34 24 I say "depending on how one counts"
09:25:37 25 because I have been retained on numerous occasions

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09:25:40 1 when the retention did not lead to any actual
09:25:44 2 work. But I was asked if I was available to do
09:25:46 3 something.

09:25:48 4 So does that mean I was retained to
09:25:51 5 provide expert testimony? Who knows. I'm not
09:25:56 6 sure I could even distinguish those occasions.

09:25:59 7 The easiest part of that is how
09:26:03 8 many times have I actually provided expert
09:26:05 9 testimony. And that's somewhere in the 1 to 200
09:26:10 10 range.

09:26:11 11 Q. On those occasions when you
09:26:13 12 provided expert testimony, did you also prepare an
09:26:16 13 expert report?

09:26:16 14 MR. FIGEL: Objection.

09:26:24 15 A. Sometimes yes and sometimes no.

09:26:28 16 Q. Would you say in those 100 to 200
09:26:31 17 occasions, the majority of the time you prepared
09:26:33 18 an expert report?

09:26:34 19 A. Yes. That -- I think
09:26:38 20 that -- that's pretty secure impressionistic
09:26:42 21 estimate without having a tally.

09:26:43 22 Q. You're currently an executive vice
09:26:46 23 president at Compass Lexecon?

09:26:48 24 A. Yes, that is correct.

09:26:49 25 Q. What work do you do in that role?

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09:26:53 1 A. I provide consulting services in
09:26:57 2 the areas of my own expertise to clients who
09:27:02 3 approach me or who approach Compass Lexecon
09:27:08 4 insiders, other than me, who identify me as a
09:27:11 5 suitable candidate for providing certain -- for
09:27:16 6 providing the kind -- the kinds of services that
09:27:22 7 I -- that fall within my areas of expertise.

09:27:23 8 Q. What are your areas of expertise?

09:27:25 9 A. Generally, applied mathematics,
09:27:32 10 applied statistics including econometrics. And I
09:27:40 11 have some expertise in the area that, at the
09:27:43 12 University of Chicago, used to be called
09:27:46 13 managerial accounting, which is a kind of applied
09:27:50 14 mathematics for managers for the analysis of
09:27:53 15 processes inside firms.

09:28:00 16 Q. Approximately how much of your
09:28:02 17 professional time at Compass Lexecon is spent in
09:28:05 18 connection with duties as a retained expert
09:28:07 19 witness?

09:28:07 20 MR. FIGEL: Objection.

09:28:07 21 A. Approximately 100 percent.

09:28:20 22 Q. Has that been true throughout the
09:28:23 23 time that you've been an executive vice president
09:28:25 24 at Compass Lexecon?

09:28:27 25 MR. FIGEL: Same objection.

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09:28:28 1 A. Yes. I should probably clarify my
09:28:31 2 previous answer by saying, since expert analysis
09:28:38 3 is the one thing that I do in my work -- that's
09:28:40 4 why I give you, say, the answer is approximately
09:28:43 5 100 percent -- if you meant -- when you said
09:28:46 6 "retained expert" in that previous question, if
09:28:49 7 you meant retained expert in the sense of an
09:28:52 8 expert involved in litigation, that's not
09:28:54 9 100 percent.

09:28:57 10 But -- so my answer was accurate as
09:28:59 11 stated. I'm just expanding on it a little bit.

09:29:03 12 Q. Sure. If I use the term "expert
09:29:05 13 witness" for purposes of this deposition, I'll
09:29:09 14 mean a retained testifying expert. Is that fair?

09:29:11 15 A. I will try and keep that in mind.
09:29:13 16 That's how I understood -- that's what I
09:29:15 17 understood you to be referring to
09:29:17 18 pre- -- actually, that's not what I understood you
09:29:20 19 to be referring to previously.

09:29:21 20 So the answer would be
09:29:23 21 approximate -- my revised answer, in light of what
09:29:26 22 you've just explained, would be approximately
09:29:30 23 90 percent.

09:29:33 24 Q. Prior to Compass Lexecon, you
09:29:37 25 worked for William E. Wecker Associates. Is that

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09:29:40 1 right?

09:29:40 2 A. Yes.

09:29:41 3 Q. What sort of work did you do in
09:29:43 4 that role?

09:29:43 5 A. Exactly the same sort of work that
09:29:45 6 I have just described in connection with Compass
09:29:48 7 Lexecon.

09:29:48 8 Q. And approximately how much of your
09:29:50 9 professional time at William E. Wecker was spent
09:29:56 10 as an expert witness?

09:29:59 11 MR. FIGEL: Objection. Withdrawn
09:30:00 12 with your definition.

09:30:01 13 A. The -- over the entire time I was
09:30:07 14 with Wecker Associates, probably 60 or 65 percent
09:30:15 15 of my time.

09:30:22 16 Q. Okay. And prior to William
09:30:25 17 E. Wecker Associates, you were a consulting
09:30:27 18 professor at Stanford University School of Law.
09:30:29 19 Is that right?

09:30:29 20 A. Yes.

09:30:30 21 Q. And did you serve as a retained
09:30:34 22 expert witness at all during your time at
09:30:38 23 Stanford?

09:30:38 24 A. Yes. And I should clarify my
09:30:41 25 previous answer, because the premise of your

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09:30:45 1 question was mistaken, actually.

09:30:46 2 You said prior to my time at
09:30:49 3 William E. Wecker Associates. Actually, that
09:30:57 4 happened during my time at William E. Wecker
09:31:00 5 Associates. My appointment at Stanford was not a
09:31:02 6 full-time position. It was something that I did
09:31:04 7 even while I was working at William E. Wecker
09:31:13 8 Associates.

09:31:13 9 Q. Understood. Thank you for that
09:31:15 10 clarification.

09:31:17 11 Prior to joining William E. Wecker
09:31:19 12 Associates in 1992, you had a variety of roles at
09:31:22 13 the University of Chicago graduate school of
09:31:24 14 business. Is that right?

09:31:25 15 A. Correct.

09:31:25 16 Q. And during the time that you were
09:31:26 17 at the University of Chicago, did you ever serve
09:31:28 18 as an expert witness?

09:31:30 19 A. No.

09:31:48 20 Q. Do you advertise your services as
09:31:51 21 an expert witness?

09:31:52 22 A. I do not. I know that there is a
09:31:59 23 profile of me on the Compass Lexecon website.

09:32:04 24 There may be -- may still be a profile on the
09:32:12 25 William E. Wecker Associates website. I did not

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09:32:15 1 personally post those profiles. So I think it's
09:32:21 2 fair to say I do not advertise myself as an expert
09:32:28 3 witness.

09:32:29 4 Q. Do you know what kinds of
09:32:30 5 information those profiles you just described
09:32:34 6 contain?

09:32:34 7 A. I have looked at them from time to
09:32:36 8 time. So I think I know that they very briefly
09:32:44 9 describe something about my background. And they
09:32:47 10 have a photograph -- a now somewhat outdated
09:32:50 11 photograph. And that they offer a link to contact
09:32:54 12 the organization or to get a copy of my CV.

09:33:00 13 Q. Is it your understanding that the
09:33:02 14 purpose of those profiles is to advertise your
09:33:06 15 services as an expert witness?

09:33:09 16 MR. FIGEL: Objection.

09:33:10 17 A. That's not how I would characterize
09:33:18 18 them, no.

09:33:19 19 Q. Have you ever been retained as an
09:33:21 20 expert witness by a plaintiff?

09:33:23 21 A. Yes.

09:33:23 22 Q. Prior to this case, have you ever
09:33:25 23 been retained as an expert witness by a defendant?

09:33:28 24 A. Yes.

09:33:28 25 Q. In all of your prior engagements as

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09:33:30 1 an expert witness, approximately what percentage
09:33:32 2 of those cases were you retained by the plaintiff?

09:33:35 3 A. I can only give you an
09:33:43 4 impressionistic estimate of that. I would say
09:33:46 5 that it is a low percentage, probably in single
09:33:50 6 digits.

09:33:54 7 If not -- if we took the trouble to
09:33:57 8 research it, if it were not in single digits, I
09:34:01 9 would be amazed if it were much above 10 percent.

09:34:04 10 Q. Prior to this case, have you ever
09:34:06 11 been retained in a case where a governmental
09:34:08 12 entity was a party?

09:34:12 13 A. I'm pausing to think about that.
09:34:34 14 Yes.

09:34:34 15 Q. How many times?

09:34:36 16 A. At least half a dozen times. But I
09:34:43 17 suspect the true -- the accurate answer is
09:34:47 18 substantially more than half a dozen. It's just
09:34:50 19 that half a dozen occasions come easily to mind.

09:34:53 20 But you've -- you -- the level of
09:34:58 21 specificity of what you're asking me now is such
09:35:00 22 that, to even give you a reasonably accurate
09:35:06 23 answer for even the past five years, I would have
09:35:09 24 to consult my list of testimony attached to my
09:35:11 25 report.

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09:35:14 1 Q. In any of the cases that you can
09:35:16 2 recall, were you retained as an expert witness by
09:35:19 3 the government?

09:35:25 4 A. Only one case comes to mind. I
09:35:35 5 can't -- I'm not certain. As you know, I've been
09:35:37 6 doing this for 30 years. So I'm not being coy
09:35:44 7 here.

09:35:44 8 Only one case comes to mind. I
09:35:47 9 can't absolutely rule out that there weren't other
09:35:49 10 examples, but one case comes to mind.

09:35:51 11 Q. Which is the case in which you were
09:35:53 12 retained by a governmental entity which you can
09:35:56 13 recall today?

09:35:59 14 A. Even though it was a really long
09:36:00 15 time ago, I am not sure that I was ever actually
09:36:04 16 disclosed in that case. And so I would need to
09:36:13 17 look into that, I believe, as a -- out of respect
09:36:15 18 to that client, to learn whether it's okay to
09:36:21 19 disclose that.

09:36:34 20 Q. Looking at Attachment B to LM-1,
09:36:38 21 which is your expert report, is it fair to say
09:36:43 22 that you were not retained by any governmental
09:36:45 23 entity listed in any of these 45 cases?

09:36:53 24 A. I'm looking at the list briefly
09:36:54 25 just to remind myself. I think the answer is

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09:36:57 1 going to be yes, but just to be sure, I'm taking a
09:37:02 2 look at it.

09:37:26 3 (Document review.)

09:37:26 4 The one questionable case -- the
09:37:29 5 one question mark for me, out of the 45, is
09:37:32 6 Item 19 where I was retained by the California
09:37:38 7 Insurance Guarantee Association, which I
09:37:41 8 understand to be a, at least some kind of
09:37:48 9 quasi-governmental entity. It is -- has some
09:37:52 10 affiliation with or connection to the state
09:37:54 11 government of California.

09:37:55 12 Q. Has your expert opinion ever been
09:37:59 13 excluded in any case?

09:38:01 14 MR. FIGEL: Objection.

09:38:01 15 A. It has.

09:38:06 16 Q. How many times has that happened?

09:38:07 17 A. There are two occasions I can think
09:38:17 18 of that -- where my opinion was -- was excluded to
09:38:24 19 the extent that I was not permitted to testify at
09:38:27 20 all.

09:38:27 21 Q. Which cases were those?

09:38:29 22 A. One of the those is in the State of
09:38:36 23 Washington. It is called Ngethpharat. I know
09:38:46 24 you're going to ask me for spelling on that.
09:38:52 25 N-g-e-t-h-p-h-a-r-a-t versus State Farm. It's

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09:39:05 1 closely associated with a case called Jama,
09:39:08 2 J-a-m-a, versus State Farm. I believe that was
09:39:11 3 in -- that is in federal court in the State of
09:39:17 4 Washington.

09:39:20 5 The other instance that I'm aware
09:39:22 6 of is from seven or so years ago in a case called
09:39:25 7 Walden v. Chrysler in state court in Georgia.

09:39:38 8 Q. In the State Farm case in
09:39:41 9 Washington federal court, for what reason was your
09:39:47 10 expert opinion excluded?

09:39:47 11 MR. FIGEL: Objection.

09:39:47 12 A. I understand that the reasons were
09:39:49 13 two-fold. One was that in a determination of
09:39:57 14 damages, the Court was persuaded that the opinion
09:40:02 15 I was providing on the definition -- the proper
09:40:10 16 definition of damages, of economic damages, was
09:40:12 17 not -- was actually a legal opinion and,
09:40:17 18 therefore, outside my area of expertise.

09:40:29 19 The rest of my opinion pertained to
09:40:31 20 whether certain calculations were -- involved
09:40:34 21 multiplication or division and why that
09:40:42 22 distinction was material to issues in the case.

09:40:45 23 And I understand that the Court
09:40:46 24 held that it did not need to be instructed on the
09:40:49 25 definition between -- the difference between

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09:40:55 1 multiplication and division.

09:40:57 2 Q. How about the Walden case. Why was
09:41:00 3 your opinion excluded in the Walden case?

09:41:02 4 A. In the Walden case, my -- I had the
09:41:05 5 assignment of examining the federal NASS
09:41:12 6 database -- that's the -- that's all caps N-A-S-S,
09:41:15 7 the National Accident Sampling System, in order to
09:41:23 8 determine whether certain events had or had not
09:41:25 9 been recorded in that database.

09:41:35 10 The Court determined that the
09:41:36 11 accidents that I was looking at in the NASS
09:41:39 12 database were not substantially similar to the
09:41:41 13 accident that gave rise to the litigation. I
09:41:48 14 believe that was the -- the Court's primary ground
09:41:57 15 for excluding my testimony, that there was a
09:42:01 16 requirement in that jurisdiction for substantial
09:42:03 17 similarity.

09:42:03 18 Q. To the best of your knowledge, is
09:42:05 19 your expert report that you submitted in the State
09:42:08 20 Farm case publicly available?

09:42:10 21 A. I have no idea.

09:42:13 22 Q. Same answer for the Walden case?

09:42:16 23 MR. FIGEL: Objection.

09:42:17 24 A. Correct.

09:42:18 25 Q. Are you familiar with the term

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09:42:19 1 "event study"?

09:42:23 2 A. Yes.

09:42:23 3 Q. Have you conducted event studies as
09:42:25 4 part of your expert witness work in the past?

09:42:27 5 A. Yes.

09:42:30 6 Q. Was an event study any part of any
09:42:32 7 of your excluded expert opinions?

09:42:34 8 A. No.

09:42:35 9 Q. Approximately how many times have
09:42:37 10 you conducted an event study in connection with
09:42:42 11 your expert witness work?

09:42:46 12 A. We are now talking about an era
09:42:50 13 from the late 1990s into the early 2000s. So it's
09:43:00 14 particularly hard for me to be precise. But my
09:43:03 15 best estimate sitting here is half a dozen
09:43:06 16 occasions.

09:43:11 17 Q. So the total number of event
09:43:13 18 studies that you've conducted in connection with
09:43:15 19 your expert witness work or your best
09:43:18 20 approximation is approximately six?

09:43:20 21 MR. FIGEL: Objection.

09:43:20 22 A. Yes.

09:43:20 23 Q. Is it fair to say that you're
09:43:22 24 familiar with the requirement that expert
09:43:24 25 witnesses set forth the basis and reasons for

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09:43:26 1 their opinions in their expert reports?

09:43:32 2 A. I certainly do not have a lawyer's
09:43:37 3 expert knowledge of the procedural rules that
09:43:45 4 govern those questions. But I have been
09:43:47 5 instructed over the years by lawyers on elements
09:43:50 6 that need to be in my reports, and I generally try
09:43:52 7 to put them there.

09:43:53 8 Q. Is it fair to say that it's your
09:43:55 9 practice to include a description of your
09:43:57 10 methodology in your expert reports?

09:44:00 11 MR. FIGEL: Objection.

09:44:01 12 A. As a very general characterization,
09:44:10 13 I think it's a fair characterization. What that
09:44:12 14 actually means in different instances depends on
09:44:15 15 the circumstances.

09:44:16 16 Q. When you describe your methodology
09:44:18 17 in your expert reports, do you include all steps
09:44:21 18 that you consider material to reach your opinion?

09:44:24 19 MR. FIGEL: Objection.

09:44:31 20 A. I do. Sometimes they're visible in
09:44:34 21 the body of the report. Sometimes they are
09:44:36 22 visible in the backup materials that I produce in
09:44:42 23 conjunction with a report which I deem to be part
09:44:46 24 of the report.

09:44:47 25 Q. Limiting this question only to

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09:44:53 1 event studies that you've conducted as an expert
09:44:56 2 witness, are there any steps that you routinely
09:44:58 3 take as part of conducting an event study but do
09:45:03 4 not include in your expert report?

09:45:05 5 MR. FIGEL: Objection.

09:45:09 6 A. As I indicated in a previous
09:45:12 7 answer, it has been a long time since I last
09:45:14 8 actually conducted an event study as opposed to
09:45:19 9 replicating an event study, which is what I did in
09:45:22 10 the present case.

09:45:28 11 And so it would be, at best,
09:45:31 12 leading for me to try to vaguely characterize what
09:45:38 13 are my standard practices when I perform an event
09:45:42 14 study.

09:45:42 15 It may well be that if I were
09:45:44 16 called upon to resume performing event studies,
09:45:47 17 that I would look at reports from long ago and
09:45:54 18 look at literature, scholarly and professional
09:45:58 19 literature, that has appeared since then, and I
09:46:01 20 may -- my standard practices may, in future, not
09:46:04 21 be what they were 20 years ago.

09:46:06 22 So I -- that was a long-winded way
09:46:10 23 of saying I don't think I can give you a fair
09:46:13 24 answer or a fair catalog of what are my standard
09:46:17 25 practices, because I -- performing event studies

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09:46:20 1 is not a standard practice of mine.

09:46:22 2 Q. Limiting ourselves to the time when
09:46:25 3 you were performing event studies in the past,
09:46:27 4 were there any steps that you routinely took then
09:46:29 5 as part of conducting those event studies but did
09:46:32 6 not include in your expert reports?

09:46:34 7 MR. FIGEL: Objection.

09:46:39 8 A. I would have to look at the expert
09:46:42 9 reports from that era to be able to answer that
09:46:45 10 question. I would doubt it, subject to the
09:46:55 11 qualification I stated a moment ago of providing
09:46:58 12 electronic backup along with the event study,
09:47:01 13 given -- interpreting my report as the -- as
09:47:04 14 including the electronic backup, I doubt that
09:47:06 15 there was any step that I took that I did not
09:47:10 16 document in my expert report.

09:47:18 17 But I can't speak to that with
09:47:21 18 specificity today. I simply don't have a clear
09:47:25 19 enough and fresh enough recollection of the work
09:47:28 20 that I did on event studies 20 years ago.

09:47:33 21 Q. How did you come to be retained as
09:47:36 22 an expert witness in this case?

09:47:38 23 A. I received either a telephone call
09:47:47 24 or an e-mail from counsel for Ripple asking me
09:47:53 25 whether I was available to discuss some issues

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09:47:56 1 concerning this litigation.

09:48:00 2 Q. Which attorney contacted you?

09:48:01 3 A. Mr. Figel to my left.

09:48:06 4 Q. When did you receive this contact
09:48:08 5 from Mr. Figel?

09:48:16 6 A. Not very long before I delivered my
09:48:19 7 report. I would say -- I don't have a precise
09:48:27 8 recall of the date of that, but whatever the date
09:48:30 9 is on which I signed the report is -- I -- I would
09:48:35 10 say, again, impressionistically, it was no more
09:48:38 11 than three weeks after when Mr. Figel called me.

09:48:43 12 Q. Prior to your retention as an
09:48:45 13 expert witness in this case, did you know anything
09:48:47 14 about Ripple?

09:48:48 15 A. Yes.

09:48:51 16 Q. What did you know?

09:48:52 17 MR. FIGEL: Objection.

09:48:52 18 A. I knew that Ripple was, in some
09:48:58 19 way, entirely, vaguely defined in my own mind,
09:49:05 20 associated with XRP, with the cryptocurrency
09:49:11 21 called XRP. And when I say "associated with,"
09:49:15 22 what I mean by that is just when I looked up
09:49:18 23 articles on XRP, I would tend to find the name
09:49:24 24 Ripple showing up somewhere in the article.

09:49:29 25 Q. Did you look up articles about XRP

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09:49:33 1 prior to your retention as an expert witness in
09:49:35 2 this case?

09:49:35 3 A. Yes.

09:49:36 4 Q. Why?

09:49:36 5 A. As part of learning how to acquire
09:49:45 6 and use XRP.

09:49:46 7 Q. Why were you interested in learning
09:49:55 8 how to acquire and use XRP?

09:49:57 9 A. I retained some supporting services
09:50:00 10 for family members in another country where the
09:50:08 11 vendor of those services had a preference for
09:50:15 12 being paid in XRP.

09:50:20 13 Q. What vendor is that?

09:50:24 14 A. An IT consultant and a general
09:50:24 15 personal assistant in -- as well as providing IT
09:50:43 16 consulting services.

09:50:43 17 Q. Is this an individual or a company?

09:50:45 18 A. An individual.

09:50:46 19 Q. Did that person tell you why they
09:50:50 20 preferred to receive payment in XRP?

09:50:51 21 A. Partly yes, partly no.

09:51:01 22 Q. Can you explain your answer?

09:51:02 23 A. Since the person was in another
09:51:05 24 country, being paid in cryptocurrency avoided the
09:51:13 25 complications of wire transfers and currency

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09:51:16 1 conversions from one -- from US dollars to a
09:51:20 2 different currency. I understood why that was a
09:51:27 3 convenience. That's the partly yes part.

09:51:33 4 Why specifically XRP as opposed to
09:51:36 5 something -- some other kind of cryptocurrency, I
09:51:40 6 do not know. That's the partly no part of my
09:51:43 7 answer.

09:51:46 8 Q. Setting aside your interaction with
09:51:49 9 this person, prior to your retention in this case,
09:51:51 10 did you know anything else about XRP?

09:51:53 11 MR. FIGEL: Objection.

09:51:56 12 A. No.

09:51:57 13 Q. Do you own XRP?

09:51:58 14 A. Yes.

09:51:59 15 Q. How did you acquire it?

09:52:01 16 A. On a cryptocurrency exchange.

09:52:06 17 Q. How much XRP do you own?

09:52:12 18 A. At present I think about \$5 worth.

09:52:18 19 Q. Why did you purchase it?

09:52:19 20 A. I purchased it in the course of
09:52:21 21 making payments to the vendor I described in a
09:52:25 22 previous answer. So I have a small remaining
09:52:27 23 balance of XRP from that transaction.

09:52:31 24 Q. Other than your payments to the
09:52:35 25 vendor that we've discussed, are there any other

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09:52:38 1 occasions -- strike that.

09:52:40 2 Other than for purposes of paying
09:52:44 3 the vendor we just discussed, are there any other
09:52:47 4 reasons why you've purchased XRP?

09:52:54 5 MR. FIGEL: Objection to form.

09:52:55 6 A. Yes.

09:52:55 7 Q. What are those reasons?

09:53:03 8 A. Curiosity about how cryptocurrency
09:53:07 9 purchases and transactions work. In other words,
09:53:20 10 before the -- having been made aware of XRP by my
09:53:25 11 interaction -- by my early conversations with the
09:53:28 12 person who I knew might later be interested in
09:53:30 13 pursuing the conversation, I went ahead and
09:53:33 14 purchased some XRP and set up an account on an
09:53:39 15 exchange just to gain some experience at how
09:53:41 16 transactions like that can be conducted and what
09:53:45 17 unexpected holdups might occur.

09:53:54 18 Q. Other than XRP, have you purchased
09:53:57 19 any other digital assets?

09:53:59 20 A. No.

09:53:59 21 Q. Sitting here today, do you have any
09:54:01 22 plans to acquire more XRP in the future?

09:54:07 23 A. I have no specific plan as I sit
09:54:10 24 here. It may be that I may need to make such
09:54:15 25 plans in order to continue paying my vendor in the

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09:54:23 1 other country that I talked about.

09:54:27 2 Q. Prior to your retention as an
09:54:30 3 expert witness in this case, did you know anything
09:54:32 4 about the SEC's case against Ripple?

09:54:37 5 A. Yes.

09:54:38 6 Q. What did you know?

09:54:43 7 A. Essentially only that there was a
09:54:44 8 case and that it -- I -- I had some inkling of
09:54:50 9 what the case was about, but certainly no detailed
09:54:59 10 knowledge.

09:54:59 11 Q. Prior to your retention in this
09:55:01 12 case, had you ever met Brad Garlinghouse?

09:55:05 13 A. Not knowingly.

09:55:09 14 Q. Prior to your retention in this
09:55:11 15 case, had you ever met Chris Larsen?

09:55:14 16 A. Not knowingly.

09:55:15 17 Q. Prior to your retention in this
09:55:17 18 case, had you ever knowingly met anyone who worked
09:55:19 19 at Ripple?

09:55:22 20 A. No.

09:55:22 21 Q. Prior to your retention in this
09:55:23 22 case, had you ever knowingly met any of the
09:55:26 23 lawyers representing defendants in this case?

09:55:33 24 A. No.

09:55:34 25 Q. Prior to retention, had you ever

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09:55:36 1 been retained by Debevoise & Plimpton?

09:55:40 2 A. Not that I recall. I should
09:55:45 3 qualify that answer by saying that I have from
09:55:51 4 time to time been involved in complex cases with
09:55:55 5 multiple counsel for different parties, and
09:55:58 6 sometimes there are joint defense arrangements.

09:56:04 7 And so even though my direct
09:56:07 8 contact may be with law firm A, I can't always
09:56:11 9 know that law firm B and law firm C are involved.
09:56:14 10 But with that qualification, I have no
09:56:16 11 recollection, as I sit here, of ever being
09:56:22 12 retained by Debevoise & Plimpton.

09:56:26 13 Q. Prior to your retention here, had
09:56:30 14 you ever been retained by Kellogg Hansen?

09:56:33 15 A. Yes.

09:56:33 16 Q. How many times?

09:56:34 17 A. Once.

09:56:46 18 Q. When?

09:56:47 19 A. Approximately three months ago.

09:56:55 20 Q. Prior to your retention, to your
09:57:04 21 knowledge, had Compass Lexecon ever been retained
09:57:08 22 by Debevoise & Plimpton?

09:57:10 23 A. It would not surprise me, but I
09:57:12 24 have no specific knowledge of it.

09:57:18 25 Q. Prior to your retention, and

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09:57:20 1 setting aside the retention we just talked about
09:57:23 2 three months ago, to your knowledge, had Compass
09:57:28 3 Lexecon ever been retained by Kellogg Hansen?

09:57:31 4 A. Yes.

09:57:31 5 Q. How many times?

09:57:32 6 A. I have no idea. I have no way of
09:57:33 7 knowing. It's not within my area of
09:57:35 8 responsibility to know such things.

09:57:41 9 Q. Are you charging defendants a fee
09:57:44 10 for your expert services in this case?

09:57:47 11 A. Broadly, yes, in the sense that I
09:57:51 12 am here as an employee of Compass Lexecon. And
09:57:55 13 Compass Lexecon does charge for my time.

09:57:57 14 Q. How much does Compass Lexecon
09:58:01 15 charge for your time?

09:58:02 16 A. I think the number is stated in my
09:58:04 17 expert report in this case. It is \$1,040 per
09:58:12 18 hour.

09:58:12 19 Q. Is this your standard hourly fee
09:58:14 20 for expert services?

09:58:18 21 A. Yes.

09:58:18 22 Q. How long has \$1,040 per hour been
09:58:24 23 your standard fee for expert services?

09:58:26 24 A. Since approximately January 1 of
09:58:30 25 2021.

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09:58:30 1 Q. What was it before then?

09:58:32 2 A. \$1,000 per hour.

09:58:37 3 Q. How much have -- strike that.

09:58:40 4 How much has Compass Lexecon billed
09:58:42 5 for your services in this case so far?

09:58:43 6 A. I do not know the answer to that.
09:58:48 7 Obviously somebody does. I'm not suggesting that
09:58:50 8 it's not a knowable thing, but it's not a thing
09:58:56 9 that I happen to know.

09:58:58 10 Q. Approximately how many hours have
09:58:59 11 you worked on this case so far?

09:59:01 12 A. That will have to be one of my now
09:59:06 13 famous impressionistic estimates. I would
09:59:15 14 estimate that at somewhere in the range of 30 to
09:59:19 15 45 hours.

09:59:20 16 Q. Have you received any compensation
09:59:29 17 in connection with this case in XRP?

09:59:31 18 A. No.

09:59:31 19 Q. Do you have any plans to receive
09:59:35 20 XRP as compensation in connection with this case?

09:59:37 21 A. I'm hoping not.

09:59:38 22 Q. To your knowledge, is Compass
09:59:40 23 Lexecon planning to receive any payment in XRP in
09:59:43 24 connection with your services provided in this
09:59:53 25 case?

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09:59:53 1 A. I'm not aware of it, but I can't
09:59:55 2 rule it out. I'm -- but as I say, I'm not aware
10:00:01 3 of it.

10:00:01 4 Q. Do you --

10:00:01 5 A. It hadn't occurred -- in fact,
10:00:02 6 before you asked, it hadn't occurred to me as a
10:00:05 7 possibility.

10:00:05 8 Q. In your position at Compass
10:00:06 9 Lexecon, is your compensation tied to the amount
10:00:10 10 that you bill to clients?

10:00:12 11 MR. FIGEL: Objection.

10:00:12 12 A. Yes.

10:00:13 13 Q. How so?

10:00:19 14 A. My compensation is tied to what --
10:00:25 15 to the hourly billings of Compass Lexecon for time
10:00:28 16 that I devote to client engagements.

10:00:35 17 Q. Is your compensation at Compass
10:00:37 18 Lexecon also tied to the total amount that Compass
10:00:40 19 Lexecon bills to clients?

10:00:41 20 A. Yes.

10:00:42 21 Q. How so?

10:00:42 22 A. There is an -- I get some so-called
10:00:49 23 attribution, a portion of billings, hourly
10:00:52 24 billings for staff working under my direction.

10:00:57 25 Q. Did others assist you with

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10:01:00 1 providing your expert services in this case?

10:01:01 2 A. Yes.

10:01:01 3 Q. Who?

10:01:02 4 A. Principally Dr. Dzmitry Asinski.

10:01:13 5 That is D-z-m-i-t-r-y. Asinski is A-s-i-n-s-k-i.

10:01:27 6 Q. What is Dr. Asinski's role at

10:01:31 7 Compass Lexecon?

10:01:32 8 A. He is a senior vice president or

10:01:39 9 something -- he has a -- a three-word title,

10:01:43 10 something like senior vice president. Maybe --

10:01:47 11 Q. How did Dr. -- sorry. Were you --

10:01:49 12 A. Maybe some hyphens in there.

10:01:53 13 Q. How did Dr. Asinski assist you with

10:01:56 14 your -- providing your expert services in this

10:01:57 15 case?

10:01:57 16 A. When computers needed to be

10:01:59 17 programmed, when data needed to be reformatted in

10:02:10 18 order to become accessible to the kind of software

10:02:12 19 that we used, when analyses had to be performed

10:02:21 20 and audited, all of that was done under my

10:02:27 21 direction but done, actually implemented by -- on

10:02:31 22 my behalf by Dr. Asinski, assisted as needed by

10:02:40 23 additional staff.

10:02:44 24 Q. Other than Dr. Asinski, is there

10:02:46 25 anyone else that assisted in -- assisted with

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10:02:51 1 providing your expert services in this case?

10:02:54 2 MR. FIGEL: Objection.

10:02:54 3 A. Yes.

10:02:54 4 Q. Who?

10:02:59 5 A. Narsid Golic. N-a-r-s-i-d

10:03:10 6 G-o-l-i-c.

10:03:10 7 Q. And how did Narsid Golic assist you
10:03:17 8 with providing your expert services in this case?

10:03:18 9 A. Narsid Golic is a -- is junior
10:03:22 10 relative to Dr. Asinski but assisted Dr. Asinski
10:03:32 11 with the practical implementation of the work that
10:03:35 12 I had directed -- that I had directed be done.

10:03:43 13 Q. When you say "assisted with the
10:03:44 14 practical implementation," what does that mean?

10:03:46 15 A. Program computers.

10:03:50 16 Q. Other than the two individuals we
10:03:51 17 just discussed, is there anyone else at Compass
10:03:54 18 Lexecon that assisted you with providing your
10:03:56 19 expert services in this case?

10:03:57 20 MR. FIGEL: Objection.

10:03:58 21 A. No one else comes to mind, but I
10:04:01 22 can't absolutely rule out that Dr. Asinski or
10:04:06 23 Mr. Golic at some point may not -- may have
10:04:11 24 brought in additional help. But it's my
10:04:18 25 understanding and it's my belief, as I sit here,

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10:04:21 1 that virtually all of the work that I did not do
10:04:23 2 myself was done by them.

10:04:29 3 Q. How much, if anything, have
10:04:32 4 Dr. Asinski and Mr. Golic billed defendants in
10:04:41 5 this case?

10:04:41 6 A. That was a little too muffled. I
10:04:44 7 think you asked how much they billed?

10:04:46 8 Q. That's right.

10:04:46 9 A. I don't know the answer to that.
10:04:48 10 As I indicated previously, I'm certainly not
10:04:50 11 suggesting and -- it's unknowable. I just don't
10:04:56 12 happen to know it.

10:04:57 13 Q. Those billing records would be with
10:05:00 14 Compass Lexecon. Is that right?

10:05:00 15 A. Correct.

10:05:01 16 Q. Do you know what their billing
10:05:03 17 rates are?

10:05:03 18 A. Only within ranges.

10:05:10 19 Q. What's the range for Dr. Asinski?

10:05:12 20 A. I believe his range, his billing
10:05:18 21 rate is somewhere within the 800s.

10:05:21 22 Q. How about Mr. Golic?

10:05:22 23 A. Five to 600 is what I believe
10:05:28 24 the -- where his range sits.

10:05:30 25 Q. Do you know approximately how many

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10:05:31 1 hours each of them have billed to this matter?

10:05:33 2 A. I do not.

10:05:40 3 Q. Did you do anything to prepare for
10:05:41 4 your deposition today?

10:05:42 5 A. Yes.

10:05:42 6 Q. What did you do?

10:05:43 7 A. I reread my own report. I actually
10:05:50 8 first reread Dr. [REDACTED] report. Then I reread my
10:05:55 9 own report. I glanced at the complaint in this
10:05:57 10 matter, the first amended complaint.

10:06:04 11 I looked briefly at the materials
10:06:12 12 that I cite as materials considered. I looked
10:06:15 13 briefly at the electronic disclosure -- disclosure
10:06:23 14 package that Mr. -- that Dr. Asinski produced
10:06:27 15 under my direction and at my request in support of
10:06:31 16 and in conjunction with my report in this matter.
10:06:48 17 I met with counsel.

10:06:51 18 Those are the things that occur to
10:06:52 19 me. If something else occurs to me that I should
10:07:00 20 have mentioned and I'm -- it's simply not coming
10:07:02 21 to mind right now. But if I -- if I have a flash
10:07:07 22 of insight or recollection, I will certainly
10:07:10 23 volunteer it if it happens in the course of this
10:07:12 24 depo.

10:07:12 25 Q. Thank you, Doctor. How many times

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10:07:16 1 did you meet with counsel in preparation for your
10:07:18 2 deposition?

10:07:21 3 A. Once.

10:07:21 4 Q. Who did you meet with?

10:07:28 5 A. Mr. Figel and his colleague,
10:07:32 6 Mr. Gideon. Mr. Gideon has so many names. I'm
10:07:37 7 hoping I'm getting his last name.

10:07:43 8 MR. GIDEON: You got it.

10:07:44 9 Q. Anyone else?

10:07:46 10 A. No.

10:07:49 11 Q. Other than counsel, did anyone
10:07:51 12 assist you with preparation for your deposition
10:07:53 13 today?

10:07:54 14 A. Yes.

10:07:54 15 Q. Who?

10:07:58 16 A. Dr. Asinski.

10:08:01 17 Q. How did he assist you with
10:08:02 18 preparation?

10:08:07 19 A. He reminded me where to look for
10:08:10 20 copies of my backup materials. He reminded me how
10:08:22 21 we had performed certain calculations at my
10:08:26 22 request. He reminded me at my request. I think
10:08:30 23 that's about it.

10:08:34 24 Q. Going back to your meeting with
10:08:36 25 counsel, how long did you meet with counsel?

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10:08:37 1 A. Three and a half -- I think it was
10:08:49 2 three and a half hours, thereabouts.

10:08:51 3 MR. FIGEL: Mr. Sylvester, I don't
10:08:55 4 mean to interrupt your questioning. But
10:08:57 5 there is a point that I think Dr. Marais may
10:09:00 6 have overlooked that I just would like to
10:09:00 7 refresh his recollection about so the record
10:09:02 8 is clear.

10:09:03 9 MR. SYLVESTER: Absolutely. Go
10:09:04 10 ahead.

10:09:04 11 MR. FIGEL: Can I just -- literally
10:09:05 12 five seconds.

10:09:05 13 MR. SYLVESTER: Feel free.

10:09:12 14 (Witness confers with counsel.)

10:09:12 15 BY MR. SYLVESTER:

10:09:12 16 Q. Any answers that you'd like to
10:09:15 17 clarify, Dr. Marais?

10:09:17 18 A. A flash of recollection has
10:09:19 19 occurred to me. There was a Zoom screen in the
10:09:21 20 meeting yesterday. And I could not tell you with
10:09:29 21 precision who was on that screen. They were
10:09:36 22 mostly represented by black rectangles with small
10:09:41 23 names.

10:09:41 24 But I do understand that other
10:09:43 25 couns- -- that counsel for other defendants in

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10:09:48 1 this case were on. That's what occurs to me to
10:09:58 2 add.

10:09:59 3 Q. Focusing just on yesterday's Zoom
10:10:02 4 call with counsel, were there any others that
10:10:05 5 weren't counsel on that call?

10:10:06 6 A. Yes.

10:10:06 7 Q. Who?

10:10:07 8 A. Dr. Asinski was on that call via
10:10:11 9 Zoom. I think I saw Mr. Golic's name. And beyond
10:10:23 10 that, I can't think of -- I cannot think, as I sit
10:10:30 11 here, of anyone else I recognized as not counsel.

10:10:36 12 Q. Have you written any publications
10:10:38 13 pertaining to event studies?

10:10:41 14 A. Yes.

10:10:41 15 Q. How many?

10:10:48 16 A. A relative handful, maybe as many
10:10:54 17 as five or six.

10:10:55 18 Q. When was the most recent of such
10:10:57 19 publications?

10:10:58 20 A. The best way for me to answer that
10:11:02 21 is to turn to my CV.

10:11:04 22 Q. Please do.

10:11:28 23 A. (Document review.)

10:11:29 24 2005.

10:11:30 25 Q. Which article are you referring to,

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10:11:32 1 Dr. Marais?

10:11:32 2 A. It's the fifth from the end on page
10:11:37 3 3 of my CV. It's called "Event study methods:
10:11:42 4 detecting and measuring the security price effects
10:11:46 5 of disclosures and interventions (with Katherine
10:11:49 6 Schipper)."

10:11:52 7 Q. The paper you just described, that
10:11:54 8 paper explains how event studies can be used in
10:11:58 9 litigation. Is that right?

10:11:59 10 A. Yes.

10:11:59 11 Q. Is that topic, how event studies
10:12:06 12 can be used in litigation, also the topics of your
10:12:08 13 other five or so papers that you've written
10:12:12 14 regarding event studies?

10:12:13 15 MR. FIGEL: Objection.

10:12:14 16 A. I'm sorry, somehow the middle part
10:12:20 17 of that question just dropped out. Would you --
10:12:23 18 would you repeat it, please.

10:12:24 19 Q. I'll ask a better question.

10:12:28 20 Setting aside the paper that we
10:12:30 21 just discussed, what was the topic of the other
10:12:33 22 papers that you wrote that pertain to event
10:12:35 23 studies?

10:12:35 24 A. I would say various.

10:12:37 25 Q. Were any of the other papers that

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10:12:39 1 you wrote pertaining to event studies also about
10:12:42 2 the topic of how event studies are used in
10:12:44 3 litigation?

10:12:44 4 MR. FIGEL: Objection.

10:12:45 5 A. Yes. In a certain sense. And
10:12:52 6 let -- I'll -- assuming you were about to ask me
10:12:55 7 what sense is that.

10:12:56 8 Q. Please go ahead.

10:12:57 9 A. The event study article with
10:13:00 10 Katherine Schipper that I described appeared in
10:13:03 11 several editions of this publication. And I
10:13:07 12 revised it on each of those occasions.

10:13:09 13 So even though not visible on my
10:13:16 14 CV, since I list only the most current version of
10:13:19 15 it, there were more versions having -- and they
10:13:22 16 all had to do with the use of event studies in
10:13:25 17 litigation.

10:13:25 18 But other writings of mine on event
10:13:28 19 studies did not have to do with litigation.

10:13:33 20 Q. Have you taught any classes that
10:13:37 21 cover the topic of event studies?

10:13:41 22 A. Yes, I would say so.

10:13:49 23 Q. When was the most recent such
10:13:51 24 class?

10:13:56 25 A. Probably 199- -- around 1998.

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10:14:08 1 Q. Am I recalling your testimony
10:14:10 2 correctly that the last time you performed an
10:14:12 3 event study as an expert witness was in the early
10:14:15 4 2000s?

10:14:16 5 MR. FIGEL: Objection.

10:14:16 6 A. Yes.

10:14:22 7 Q. Prior to your retention in this
10:14:25 8 case, have you submitted an expert rebuttal report
10:14:31 9 commenting on an event study conducted by another
10:14:31 10 expert witness?

10:14:32 11 A. That is possible although I don't
10:14:33 12 remember it specifically. And if it happened, it
10:14:35 13 would have been in that era.

10:14:37 14 Q. And by "that era," do you mean the
10:14:39 15 late 1990s to the early 2000s?

10:14:42 16 A. Yes, I do. I can't absolutely rule
10:14:50 17 out that it hasn't happened in the interim as
10:14:55 18 well. I'm fairly sure I have not created an event
10:14:59 19 study and sponsored it as part of an expert report
10:15:04 20 since the early 2000s.

10:15:09 21 But I can't absolutely rule out
10:15:10 22 that I haven't responded to an event study. It
10:15:13 23 was not very recent because, if it had happened
10:15:16 24 very recently, I would remember it.

10:15:18 25 Q. So is it fair to say that, of the

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10:15:28 1 cases that appear on your Attachment B, none of
10:15:34 2 these cases involved event studies?

10:15:36 3 MR. FIGEL: Objection.

10:15:44 4 A. I think the answer is going to be
10:15:46 5 yes, but I'm going to look very quickly.

10:15:49 6 (Document review.)

10:17:03 7 The reason I took the time is that
10:17:07 8 I do recall that there have been occasions when I
10:17:10 9 recognized something I was doing as a direct
10:17:13 10 analogue of an event study, even though it was not
10:17:18 11 in the conventional securities litigation format.
10:17:21 12 And I was trying to remind myself of when that
10:17:25 13 might have occurred.

10:17:28 14 It is fair to say that I have
10:17:35 15 not -- in the list of engagements that I just
10:17:38 16 looked at, there is nothing that I would call a
10:17:41 17 conventional event study in the context of a
10:17:44 18 securities litigation.

10:17:45 19 There are instances in work that I
10:17:49 20 performed in some of those cases where I did
10:17:51 21 recognize and may even have mentioned in a report
10:17:53 22 that this is the analogue of an event study as
10:17:57 23 applied in the securities litigation format.

10:18:07 24 Q. Which cases fall into that latter
10:18:10 25 analogous category, I'll call it?

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10:18:13 1 MR. FIGEL: Objection.

10:18:13 2 A. The one that is easiest to recall
10:18:20 3 is one in which I -- is one that is so recent that
10:18:23 4 it is not on that list. It is a critical case,
10:18:31 5 United States versus Tyson Rhame, et al. Tyson is
10:18:39 6 T-y-s-o-n. Rhame is R-h-a-m-e.

10:18:48 7 Q. Are there any other retentions as
10:18:56 8 an expert witness or -- strike that.

10:18:58 9 Are there any other occasions on
10:19:00 10 which you've offered deposition or trial testimony
10:19:02 11 in the last four years that are not listed in
10:19:04 12 Attachment B?

10:19:15 13 A. I know that there is at least one
10:19:18 14 more.

10:19:31 15 (Document review.)

10:19:31 16 I was -- yes, so there was Rhame,
10:19:36 17 and there was -- I've also been deposed since I
10:19:37 18 created this list.

10:19:38 19 Q. You're referencing a case other
10:19:45 20 than Rhame. Is that right?

10:19:45 21 A. Correct.

10:19:46 22 Q. What's that case?

10:19:49 23 A. It is entitled, I think, Greenway
10:19:54 24 of West Palm Beach versus Kia Motors of America,
10:20:01 25 Kia being K-i-a.

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10:20:06 1 Q. Going back to the Rhame case, at a
10:20:13 2 very high level, what was the expert opinion that
10:20:15 3 you offered in that case?

10:20:16 4 A. At a very high level, that the
10:20:19 5 government's calculation of the so-called actual
10:20:26 6 loss amount in that case was unfounded.

10:20:40 7 Q. How would you define the term
10:20:47 8 "event study"?

10:20:54 9 A. In much the same way as the
10:20:57 10 definition stated in -- I think I gave some -- a
10:21:04 11 terse definition in my report. And Dr. [REDACTED] also
10:21:09 12 defines an event study and refers to literature
10:21:12 13 that defines event studies such as Craig
10:21:17 14 MacKinlay's article and Binder's review article.
10:21:25 15 So I would give you a perfectly conventional
10:21:28 16 definition.

10:21:36 17 Now, I've -- now that I described
10:21:40 18 how -- described the manner in which I would
10:21:41 19 define it, if you want the actual definition, I
10:21:44 20 could give you that too.

10:21:45 21 Q. Let me ask it -- this question: Is
10:21:48 22 it fair to say that event studies are used to
10:21:49 23 provide answer to two questions: Did an
10:21:50 24 announcement cause a price reaction, and what was
10:21:54 25 the price reaction to the announcement alone?

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10:21:55 1 MR. FIGEL: Objection.

10:22:03 2 A. I think what you're asking me about
10:22:05 3 from a statistician's perspective is statistical
10:22:10 4 significance and point estimate of an announcement
10:22:12 5 effect.

10:22:14 6 And your question does seem to
10:22:16 7 focus on litigation -- the way you say that seems
10:22:20 8 to focus on litigation applications as opposed to
10:22:23 9 how event studies are really and widely and mostly
10:22:29 10 used in academic research.

10:22:32 11 So with that qualification, I -- I
10:22:36 12 agree that those are key kinds of questions that
10:22:43 13 are addressed using event studies.

10:22:50 14 Those are not the only questions
10:22:51 15 that can be addressed by event studies, and I'm
10:22:57 16 sure they are not the only questions that have
10:23:00 17 been addressed, even in litig- -- even in
10:23:01 18 litigation settings alone. But I'll grant you
10:23:07 19 that those are two things that one could approach
10:23:10 20 via an event study.

10:23:13 21 Q. Are those two questions the
10:23:14 22 questions that are typically addressed by event
10:23:18 23 studies in litigation?

10:23:19 24 MR. FIGEL: Objection.

10:23:19 25 A. Being a statistician and not a

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10:23:26 1 diviner, I would need data on -- I would need to
10:23:36 2 go out and collect instances of event studies used
10:23:42 3 in litigation and then code them up in a
10:23:43 4 systematic way.

10:23:44 5 It wouldn't -- so the fair answer
10:23:47 6 to your question is I -- I couldn't possibly say.
10:23:52 7 But I can be a little bit more helpful and say it
10:23:55 8 would not surprise me to discover that those are
10:24:02 9 the most frequently asked questions.

10:24:05 10 Q. Limiting event studies to their use
10:24:08 11 in litigation, how does an event study answer the
10:24:11 12 question of whether an announcement caused a price
10:24:14 13 reaction?

10:24:14 14 MR. FIGEL: Objection.

10:24:23 15 A. So that I understand what you're
10:24:24 16 asking me, you're asking about the actual process
10:24:28 17 of using an event study. Is that right? You
10:24:32 18 would like me to describe the steps of the method?

10:24:39 19 In other words, your -- your
10:24:40 20 question is a little bit ambiguous. Possible
10:24:43 21 answer might be, they do it very well or they
10:24:47 22 don't do it very well. But I think you're not
10:24:49 23 asking -- you ask how -- how do they do it.

10:24:52 24 Q. Let me ask a better question.
10:24:54 25 Would you agree with the statement: The

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10:24:55 1 statistical significance of the event parameter
10:25:00 2 shows that we can conclude with 95 percent
10:25:03 3 confidence that the value of a specific security
10:25:05 4 being examined declined or increased as a result
10:25:08 5 of the information event?

10:25:12 6 MR. FIGEL: Objection.

10:25:13 7 A. Would I agree or -- your question
10:25:14 8 is would I agree or disagree with that statement?

10:25:16 9 Q. That's right.

10:25:17 10 A. I couldn't possibly agree or
10:25:19 11 disagree with that statement without knowing the
10:25:23 12 context, what had -- the calculations that had
10:25:26 13 been performed, whether they'd been performed
10:25:30 14 correctly.

10:25:31 15 When you're -- you seem -- with due
10:25:33 16 respect, sir, you seem to be reading the
10:25:35 17 conclusion of an elaborate calculation and -- that
10:25:40 18 you have not specified and then asking me whether
10:25:43 19 I agree with the conclusion. Sorry. I'm unable
10:25:52 20 to say without more information.

10:25:53 21 Q. In your experience, is a 95 percent
10:25:55 22 confidence level sufficient for an expert to opine
10:25:59 23 that a given news event caused a price impact?

10:26:02 24 MR. FIGEL: Objection.

10:26:02 25 A. I will answer that -- I think the

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10:26:17 1 only fair way to answer that is in two parts, one
10:26:23 2 of which is yes and the other of which is no. And
10:26:27 3 I will have to make that a fair and informative
10:26:31 4 answer, which was certainly my intention. I will
10:26:34 5 have to explain the yes and the no.

10:26:36 6 Q. Please do.

10:26:39 7 A. The confidence level at which
10:26:42 8 statistical inferences of all kinds are performed,
10:26:48 9 the confidence level, and in particular an event
10:27:00 10 study type of analysis, that is a choice. It --
10:27:01 11 the data does not -- neither the question nor the
10:27:04 12 data dictates that 95 percent be the confidence
10:27:08 13 level.

10:27:08 14 It is a choice that the researcher
10:27:10 15 makes, how certain do I want to be that I -- that
10:27:15 16 the conclusions that I arrive at do correspond to
10:27:20 17 a real -- a real effect, an empirical effect.

10:27:24 18 And one can prespecify a confidence
10:27:26 19 level of 99 percent or of 95 percent or of
10:27:32 20 90 percent. It's a choice. So it's not the data
10:27:35 21 speaking. It's the researcher speaking.

10:27:40 22 I generally counsel against picking
10:27:44 23 any of those as a prespecified threshold. But if,
10:27:48 24 nevertheless, a researcher was going to go --
10:27:54 25 plunge ahead and follow that path, it is -- I

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10:27:57 1 would agree with the proposition -- this is the
10:27:59 2 yes part of my answer -- I would agree with the
10:28:01 3 proposition that 95 percent is the overwhelmingly
10:28:08 4 predominant choice of a level of confidence for a
10:28:13 5 statistical analysis. It's not the only choice.
10:28:14 6 And there's no genuinely principled reason why
10:28:19 7 that has to be the level of confidence.

10:28:25 8 But in reality, across the entire
10:28:32 9 domain of applied statistics, including
10:28:32 10 econometrics and other areas of application, that
10:28:35 11 is the level of confidence that researchers pick.
10:28:37 12 So that -- so, yes, that's the yes part.

10:28:40 13 The no part is that event studies
10:28:49 14 are, by their nature, studies of observational
10:28:52 15 data. And one cannot infer causation solely from
10:29:10 16 observing an apparently statistically significant
10:29:17 17 finding.

10:29:19 18 So your question, which we've all
10:29:21 19 forgotten by now, involved whether 95 percent
10:29:27 20 confidence is sufficient to infer that one thing
10:29:36 21 had caused another thing. And in observational
10:29:40 22 data, you can never really get to causation merely
10:29:43 23 by observing a statistically significant outcome
10:29:48 24 from a calculation.

10:30:03 25 MR. SYLVESTER: We've been going

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10:30:05 1 for about an hour 15. Can we take a quick
10:30:07 2 break? Is that all right?

10:30:07 3 THE WITNESS: Works for me.

10:30:09 4 THE VIDEOGRAPHER: The time is
10:30:09 5 10:29 a.m. This concludes Media 1. Off the
10:30:09 6 record.

10:48:18 7 (Recess taken from 10:29 a.m. to
10:51:11 8 10:50 a.m.)

10:51:11 9 THE VIDEOGRAPHER: The time now is
10:51:11 10 10:50 a.m. This begins Media 2. On the
10:51:11 11 record.

10:51:11 12 BY MR. SYLVESTER:

10:51:18 13 Q. Dr. Marais, other than the State
10:51:20 14 Farm and Walden cases that we discussed earlier,
10:51:24 15 has there been any occasion in which a portion of
10:51:27 16 any of your expert report has been excluded?

10:51:30 17 MR. FIGEL: Objection.

10:51:30 18 A. Yes.

10:51:31 19 Q. How many times has that happened?

10:51:34 20 A. There are two occasions I'm aware
10:51:50 21 of.

10:51:50 22 Q. What were those two cases?

10:51:53 23 A. One of them was a case called
10:52:00 24 Hernandez versus Crown Corporation. The other was
10:52:07 25 a case called Tuf Racing, T-u-f Racing, versus

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10:52:15 1 Suzuki.

10:52:17 2 Q. Why was a portion of your expert
10:52:20 3 report excluded in the Hernandez case?

10:52:26 4 A. In one portion of my report, I
10:52:28 5 compared the rate of injuries of the subject type
10:52:35 6 of forklift truck to every -- to the rate of
10:52:43 7 injuries from the tools of the trade in every
10:52:46 8 other private sector occupation in the United
10:52:52 9 States.

10:52:53 10 And the Court held that that was a
10:52:55 11 form of comparative risk testimony and that, in
10:53:00 12 that jurisdiction, comparative risk was not
10:53:05 13 admissible as a defense against whatever it was
10:53:08 14 that was being alleged.

10:53:12 15 And so that was only a portion of
10:53:14 16 my work. I had -- it was a small portion of my
10:53:16 17 work. And that portion was excluded.

10:53:18 18 Q. What jurisdiction was the Hernandez
10:53:20 19 case?

10:53:21 20 A. I don't recall. It was somewhere
10:53:24 21 on the east coast.

10:53:25 22 Q. For what reason was a portion of
10:53:31 23 your expert report excluded in the Tuf Racing
10:53:35 24 case?

10:53:36 25 MR. FIGEL: Objection.

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10:53:36 1 A. In Tuf Racing, I was responding to
10:53:43 2 an opposing expert on damages allegedly suffered
10:53:46 3 by the Tuf Racing enterprise.

10:53:52 4 Among my multiple opinions in that
10:53:53 5 case, I had opined that the -- that first
10:54:01 6 principles dictated that the proper target date
10:54:04 7 for discounting allegedly lost earnings to a
10:54:10 8 present value was the date on which the harm
10:54:13 9 occurred, the breach.

10:54:16 10 And so the present value should be
10:54:19 11 calculated as of the breach date and then carried
10:54:23 12 forward maybe at a pretrial or posttrial interest
10:54:29 13 rate from that date, but that that was the target
10:54:31 14 date.

10:54:31 15 The Court held that in Cook County,
10:54:34 16 Illinois, it was not first principles that
10:54:37 17 mattered, it was legal precedence and that that
10:54:40 18 was -- the choice of target date was not a topic
10:54:47 19 for expert testimony.

10:54:48 20 I was allowed, however, to testify
10:54:51 21 on every other aspect of my work, and we -- the
10:54:57 22 side that retained me prevailed in that case
10:55:01 23 based, in part, on my testimony.

10:55:05 24 Q. Do you recall testifying earlier
10:55:07 25 today that you've performed approximately six

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10:55:11 1 event studies in connection with prior expert
10:55:15 2 witness retentions?

10:55:15 3 A. I did. I also recall qualifying
10:55:18 4 that answer because all of that was a very long
10:55:22 5 time ago.

10:55:23 6 Q. Which of those six cases can you
10:55:29 7 recall sitting here today?

10:55:29 8 A. I recall a case in which I was
10:55:40 9 retained by a pension fund for firemen and a
10:55:49 10 pension fund for nurses.

10:55:53 11 It was a securities litigation, and
10:56:00 12 the union pension funds were suing somebody in
10:56:05 13 connection with inadequate disclosure or something
10:56:07 14 of the kind. And I recall my work as involving an
10:56:12 15 event study.

10:56:19 16 Q. Do you remember the somebody who
10:56:20 17 was being sued in that case?

10:56:22 18 A. I do not.

10:56:23 19 Q. Do you remember which -- what the
10:56:25 20 name was of the pension fund you referenced?

10:56:29 21 A. No, it's -- as I've testified, it's
10:56:31 22 20 years ago. I don't recall.

10:56:33 23 Q. Do you remember what court that was
10:56:34 24 in?

10:56:34 25 A. I have a vague sense that it was in

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10:56:39 1 California, that the case was venued in
10:56:44 2 California. But whether it was in state court or
10:56:47 3 federal court, I don't recall.

10:56:48 4 Q. What other cases, if any, can you
10:56:51 5 recall, sitting here today, where you provided an
10:56:53 6 expert report that contained an event study?

10:56:55 7 MR. FIGEL: Objection.

10:56:56 8 A. The name Time Warner comes to mind
10:57:03 9 as a defendant in one such case. I can't be sure
10:57:11 10 that's not the widows and the -- not widows, the
10:57:16 11 nurses and firemen case.

10:57:21 12 But I -- I vaguely recall that
10:57:24 13 there was such a -- such a case -- such an
10:57:28 14 instance. Those are the two that I remember, even
10:57:33 15 though only partially and vaguely.

10:57:36 16 Q. So just for the record, those are
10:57:41 17 the only two cases in which you performed an event
10:57:44 18 study in connection with your expert witness work
10:57:48 19 that you can recall sitting here today?

10:57:50 20 MR. FIGEL: Objection.

10:57:51 21 A. That I -- that I think I recall
10:57:54 22 involving an event study, yes.

10:58:01 23 Q. Do you recall what jurisdiction the
10:58:02 24 Time Warner case was in?

10:58:03 25 A. No. I'm -- as I indicated in a

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10:58:09 1 previous answer, I'm not even sure that is not the
10:58:12 2 same case as the one that I referred to. But
10:58:15 3 other than that, I don't remember.

10:58:21 4 Q. Have you ever made any profits or
10:58:23 5 losses from trading XRP?

10:58:27 6 A. In -- yes, although only
10:58:33 7 incidentally.

10:58:33 8 Q. Can you explain what you mean by
10:58:40 9 "only incidentally."

10:58:41 10 A. I purchased some XRP to pay my
10:58:44 11 vendor in the matter I referred to earlier. I
10:58:53 12 held those XRP for some time, for a few weeks. By
10:59:02 13 the time I was making the payments, the value of
10:59:05 14 XRP had dropped.

10:59:06 15 And so in that sense I, incidental
10:59:12 16 to a transaction, I suffered a tiny loss by
10:59:16 17 holding XRP for some period of time.

10:59:21 18 Q. Other than the loss that you just
10:59:23 19 described, were there any other occasions where
10:59:25 20 you either made a profit or suffered a loss on XRP
10:59:28 21 trading?

10:59:30 22 MR. FIGEL: Objection.

10:59:30 23 A. No. I -- I should revise that
10:59:41 24 answer. I've testified already that I have a
10:59:43 25 balance that's probably about \$5 in XRP. So I may

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10:59:47 1 be making a profit or a loss as we sit here. But
10:59:50 2 it's not on a large scale.

10:59:55 3 Q. Is it fair to say that on some
10:59:57 4 occasions, event studies establish that prices
11:00:02 5 react to news?

11:00:03 6 A. That's broadly what event studies
11:00:06 7 are used for. So on some occasions, that does
11:00:10 8 seem to be the case, yes.

11:00:18 9 Q. In performing an event study, an
11:00:21 10 expert has to undertake a number of steps. Is
11:00:25 11 that fair?

11:00:25 12 MR. FIGEL: Objection.

11:00:25 13 A. An expert would have to do some
11:00:32 14 work, and work can often be divided up into steps.

11:00:35 15 Q. In conducting an event study, the
11:00:38 16 expert must identify the announcement or
11:00:40 17 announcements whose potential effect on the
11:00:44 18 security price is in question. Is that right?

11:00:46 19 A. Hard to disagree with that the
11:00:50 20 expert has to do something like that.

11:00:53 21 Q. At some point in conducting an
11:00:55 22 event study, the expert will have to determine
11:00:58 23 which trading days he's examining. Is that right?

11:01:01 24 MR. FIGEL: Objection.

11:01:01 25 A. Explicitly or implicitly, yes.

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11:01:08 1 Q. And at some point, the expert would
11:01:11 2 have to determine which days within the period he
11:01:13 3 observes an abnormal price reaction for the
11:01:17 4 security at issue. Correct?

11:01:18 5 MR. FIGEL: Objection.

11:01:19 6 A. Event studies typically involve
11:01:21 7 something along those lines.

11:01:25 8 Q. When performing an event study,
11:01:32 9 would an expert typically start with identifying
11:01:37 10 all significant price changes and then check to
11:01:40 11 see if any of these changes could be linked to the
11:01:43 12 news events, or does the expert start with the
11:01:46 13 news events and see if there were significant
11:01:49 14 price changes on the news event days?

11:01:52 15 MR. FIGEL: Objection.

11:01:53 16 A. Event studies are performed in
11:01:56 17 multiple different ways. I've already indicated
11:02:04 18 in my testimony earlier today, there are things
11:02:06 19 that don't even look like conventional event
11:02:09 20 studies that can be considered event studies. So
11:02:13 21 the best answer I can give you is: It depends.

11:02:17 22 There is an event study at issue in
11:02:23 23 this case, as I think we all know, in which
11:02:27 24 Dr. [REDACTED] performed a distinctly nonstandard kind
11:02:32 25 of analysis that -- for which he doesn't provide a

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11:02:36 1 specific citation, and that may be because no
11:02:40 2 citation exists.

11:02:41 3 So I mention that to point out that
11:02:45 4 it is an event study of a kind. And it has
11:02:51 5 features that are pretty much unique to it, in my
11:02:55 6 experience. Although I can't rule out that there
11:03:00 7 might not be some precedence for it.

11:03:02 8 So it would be misleading to
11:03:09 9 generalize that an event study always has feature
11:03:16 10 X and never has feature Y. Because Dr. [REDACTED]
11:03:20 11 surprises us with a nonstandard kind of event
11:03:24 12 study formulation, which I would not have -- you
11:03:29 13 might have asked me about yesterday and I would
11:03:32 14 have said that I had never seen such a thing.
11:03:34 15 Well, not yesterday, but the day before Mr. Figel
11:03:39 16 called me.

11:03:40 17 Q. On the occasions on which you've
11:03:48 18 conducted event studies, have you typically
11:03:50 19 investigated abnormal price reactions on all
11:03:56 20 no-news days before and after the news event days
11:03:59 21 in question?

11:04:00 22 MR. FIGEL: Objection.

11:04:00 23 A. I would have to go back both to the
11:04:03 24 event studies that I performed in litigation more
11:04:06 25 than 20 years ago and the event studies with which

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11:04:10 1 I was involved in as an academic researcher before
11:04:24 2 I became a private consultant to -- and refresh my
11:04:27 3 recollection of what I did on those occasions --
11:04:29 4 I'm -- to really give you an accurate answer to
11:04:31 5 that question.

11:04:36 6 But I'm sorry, what -- maybe I
11:04:39 7 misheard, I -- could we just go back. Could you
8 restate the question so I'm sure I'm answering the
9 right thing.

10 Q. Sure. On the occasions on which
11 you've conducted event studies, have you typically
12 investigated abnormal price reactions on all
13 no-news days -- strike that.

14 Yeah. Okay. On the occasions on
15 which you've conducted event studies in the past,
16 have you typically investigated abnormal price
17 reactions on all no-news days in addition to
18 investigating price reactions on the news event
11:05:28 19 days within the period you're examining?

11:05:30 20 MR. FIGEL: Objection.

11:05:30 21 A. I don't think I can -- I'm able --
11:05:34 22 for the reasons that I've testified about, I don't
11:05:38 23 think I'm able to characterize what I have
11:05:41 24 typically done at this point without refreshing my
11:05:45 25 recollection on -- I'm fairly sure that there were

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11:05:48 1 occasions where I did something that seems to
11:05:50 2 resemble what you're asking about, and on other
11:05:54 3 occasions, I did nothing that resembles what
11:05:57 4 you're asking me about.

11:05:58 5 But to apply the characterization
11:06:00 6 of "typically," I'm not able to do that at
11:06:06 7 this -- at a 20-year distance in time.

11:06:09 8 Q. Can you recall an occasion where,
11:06:12 9 as part of conducting an event study, you
11:06:19 10 investigated abnormal price reactions on days on
11:06:21 11 which there was not a news event in question?

11:06:26 12 A. Not as I sit here today for the
11:06:29 13 simple reason that I've testified about,
11:06:31 14 repeatedly, of the 20-year remove.

11:06:41 15 I -- as a -- as a -- I will add
11:06:45 16 that as a -- as an academic, I performed many more
11:06:51 17 event studies than I ever did once I left
11:06:59 18 academia. And so it was one of my research areas.

11:07:01 19 So I applied a wide range of
11:07:06 20 methodologies and -- to a wide range of questions
11:07:11 21 in a wide range of ways, none of which I can
11:07:17 22 testify about as fresh recollections, sitting here
11:07:22 23 today.

11:07:22 24 Q. And just for the record, when I
11:07:24 25 asked that last question about event studies, were

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11:07:28 1 you answering for all event studies you've ever
11:07:31 2 conducted, or event studies limited to your work
11:07:35 3 as an expert witness?

11:07:37 4 A. When I understood your question to
11:07:40 5 be about work as an expert witness, I answered
11:07:43 6 about those event studies. And when you did not
11:07:47 7 qualify the event studies you were asking me
11:07:49 8 about, I was asking about event studies throughout
11:07:51 9 my life.

11:07:55 10 Q. Thank you. Is it fair to say that,
11:08:05 11 if you had investigated abnormal price reactions
11:08:09 12 that occurred on days other than news event days,
11:08:15 13 and you prepared an expert report in connection
11:08:20 14 with the event study, you would have documented
11:08:22 15 those investigative steps in your invest- -- in
11:08:25 16 your expert report?

11:08:26 17 MR. FIGEL: Objection.

11:08:40 18 A. If those investigative steps,
11:08:46 19 whatever they may have been, fitting somewhere
11:08:52 20 under the -- in the category you're asking about,
11:08:55 21 if they had been a material part of the basis of
11:08:59 22 my opinions, I would have described them as such.

11:09:06 23 And if they had been -- not been a
11:09:11 24 material part of the basis of opinions, expert
11:09:13 25 opinions I was rendering, I may not necessarily

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11:09:18 1 have, although I may still have referred to them
11:09:21 2 in passing.

11:09:31 3 Q. Can you recall any of your previous
11:09:33 4 expert reports in which you did document any steps
11:09:35 5 you took to investigate abnormal price reactions
11:09:39 6 that occurred on days other than news event days?

11:09:41 7 MR. FIGEL: Objection.

11:10:00 8 A. If we -- I cannot recall such an
11:10:18 9 instance for the reason that I have testified
11:10:20 10 about repeatedly.

11:10:22 11 Although, if you -- if we drop the
11:10:25 12 word "price" and just refer to reactions, I can
11:10:28 13 recall an instance.

11:10:30 14 Q. Can you tell me what steps you took
11:10:35 15 in the instance you just referenced?

11:10:37 16 MR. FIGEL: Objection.

11:10:37 17 A. I am thinking of an analysis, not
11:10:45 18 of price, but in effect, of trading volume and in
11:10:58 19 a matter with a set of news days and announcement
11:11:03 20 days and a number of extremely prominent changes
11:11:16 21 in trading volume.

11:11:23 22 And the step that I took -- I took
11:11:30 23 multiple steps, not all of which I remember, but
11:11:33 24 one step that I took is to make a time series
11:11:36 25 graph showing trading volumes overlaid on a set of

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11:11:47 1 timelines showing announcement dates and onset
11:11:53 2 dates of various key events and key announcements,
11:11:58 3 key disclosures in the case, whose -- so I created
11:12:07 4 such a -- such a picture and then wrote text
11:12:13 5 surrounding it, describing what the graphical
11:12:20 6 illustration showed and what it did not show and
11:12:24 7 what conclusion I drew from it.

11:12:32 8 Q. What case is it that you are
11:12:35 9 discussing in connection with which you performed
11:12:38 10 the work you just discussed?

11:12:40 11 A. It is the United States versus
11:12:42 12 Rhame matter.

11:12:51 13 Q. So this is a rather recent
11:12:53 14 engagement. Is that right?

11:12:54 15 A. Yes.

11:13:00 16 Q. What question were you
11:13:01 17 investigating in the Rhame matter?

11:13:07 18 A. Whether there was evidence in one
11:13:12 19 kind of volume data versus a different kind of
11:13:17 20 volume data of -- that would support the -- the
11:13:28 21 hypothesis of a causal link from the announcement
11:13:35 22 or the disclosure or the event -- there were some
11:13:42 23 of each of those in the case -- with changes in
11:13:48 24 volume, in trading volumes.

11:13:52 25 Q. Did you find such a link?

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11:13:56 1 A. I found what appeared to be the
11:13:59 2 absence of such a link.

11:14:03 3 Q. Was part of the basis for your
11:14:06 4 finding of an absence of such a link your
11:14:10 5 identification of abnormal reactions in trading
11:14:17 6 volume on days other than the news event days in
11:14:23 7 question in that case?

11:14:24 8 A. I'd say so, yes. I think that
11:14:31 9 fairly describes what I did.

11:14:35 10 Q. Is your reasoning -- strike that.
11:14:40 11 Have you disclosed your expert
11:14:43 12 report in that case?

11:14:49 13 A. I have -- I submitted a report in
11:14:51 14 that case. I am not -- if that -- yeah. It was
11:14:56 15 disclosed to the government in that case. I don't
11:15:01 16 know what other sense of disclosure you might have
11:15:04 17 in mind.

11:15:13 18 Q. Is there any other
11:15:13 19 expert's -- strike that.

11:15:17 20 Is there any other event study that
11:15:18 21 you performed, in connection with your expert work
11:15:22 22 or otherwise, in which you have reached a
11:15:25 23 conclusion that there was no link between the
11:15:30 24 event or events in question and an effect on price
11:15:41 25 or volume on the basis of abnormal movements in

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11:15:45 1 price or volume on non-news event days?

11:15:48 2 MR. FIGEL: Objection.

11:16:03 3 A. Could I hear the question read
11:16:05 4 back.

11:16:05 5 MR. SYLVESTER: I'm going to ask
11:16:06 6 the court reporter to read that one back,
11:16:08 7 please.

11:16:12 8 (Record read by the certified
9 stenographer as follows:

10 "QUESTION: Is there any other
11 event study that you performed, in connection
12 with your expert work or otherwise, in which
13 you have reached a conclusion that there was
14 no link between the event or events in
15 question and an effect on price or volume on
16 the basis of abnormal movements in price or
11:16:46 17 volume on non-news event days?")

11:16:46 18 A. The question begins with a
11:16:49 19 premise -- or begins "is there any other event
11:16:53 20 study." It's not clear to me what other events --
11:17:02 21 when you say "other," other than what?

11:17:07 22 The Rhame analysis was not, per se,
11:17:11 23 an event study, as I testified earlier and
11:17:14 24 explained earlier. It -- one could recognize an
11:17:17 25 analogue in there, but it wasn't really an event

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11:17:20 1 study. So when you say "any other," do you mean
11:17:23 2 any other than Rhame?

11:17:29 3 BY MR. SYLVESTER:

11:17:29 4 Q. If we amend my question to include
11:17:32 5 any expert work you've performed, can you answer
11:17:35 6 the question amended to any expert work you
11:17:38 7 performed?

11:17:38 8 A. Okay. Let me make sure I've got
11:17:41 9 the question straight then.

11:17:42 10 Q. Sure.

11:17:43 11 A. In any expert work, where by
11:17:48 12 "expert" we mean potentially testifying expert,
11:17:51 13 not just that I was an expert as an academic on a
11:17:55 14 certain topic, so test- -- in any work as a
11:18:01 15 retained testifying expert.

11:18:03 16 Q. Let's expand it to any work you've
11:18:07 17 performed as a statistician examining the impact
11:18:10 18 of a news event on something like price or volume.

11:18:20 19 A. Okay. So I'm a statistician for
11:18:22 20 this hype- -- this setup. Any work I have
11:18:29 21 performed that relates to identifying the effect
11:18:33 22 of an event on price or volume, that's the
11:18:44 23 situation.

11:18:45 24 And in such a situation, have I
11:18:47 25 ever reached the conclusion that there was no

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11:18:53 1 impact by investigating ab- -- statistically
11:19:08 2 significant abnormal somethings not coinciding
11:19:15 3 with a news event or with the event that is the
11:19:19 4 subject. Was -- have I got that -- was that
11:19:22 5 right?

11:19:22 6 Q. Yes.

11:19:26 7 A. Okay. I don't recall such an
11:19:27 8 instance, and I don't even think that fairly
11:19:33 9 describes my work in this case. So sitting here,
11:19:36 10 I can't recall any such instance.

11:19:38 11 Q. Does that describe your work in
11:19:41 12 Rhame?

11:19:43 13 MR. FIGEL: Objection.

11:19:51 14 A. I think -- understanding that it
11:19:52 15 was not an event study in the normal sense of that
11:19:56 16 term, yes, I think that fairly -- that's -- it's
11:20:04 17 not how I did or would describe my work in Rhame.
11:20:09 18 But you -- obviously, you get to ask
11:20:14 19 the -- formulate the question. I've -- I think I
11:20:18 20 can agree that that sounds a lot like what I did
11:20:21 21 in Rhame.

11:20:22 22 Q. In the papers that you've written
11:20:45 23 about event studies, Dr. Marais, have you ever
11:20:49 24 mentioned that the investigation of abnormal price
11:20:54 25 reactions on non-news event days is a step that

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11:20:58 1 someone performing an event study should take?

11:21:02 2 MR. FIGEL: Objection.

11:21:15 3 A. If I did it, there would have been
11:21:17 4 a context for it that I don't recall sitting here
11:21:22 5 today. I will frankly admit, I have not reread my
11:21:27 6 papers on event studies in many years, at least,
11:21:33 7 multiple years.

11:21:34 8 So I -- I am -- you know, it's
11:21:36 9 either there or not. And I don't recall -- I
11:21:43 10 can't testify to that with any definite
11:21:49 11 recollection sitting here today.

11:21:50 12 Q. Is it fair to say that when you
11:21:51 13 wrote your papers regarding event studies, that
11:21:58 14 you included within those papers the procedures
11:22:02 15 that you considered necessary to perform a proper
11:22:05 16 event study?

11:22:08 17 A. Certainly the procedures that I
11:22:15 18 considered necessary to perform a proper event
11:22:17 19 study for the purposes for which those event --
11:22:22 20 the event studies I was writing about were being
11:22:25 21 conducted.

11:22:25 22 Q. You've also written at least one
11:22:31 23 paper that addresses the topic, in general terms,
11:22:36 24 of how event studies can be used in litigation.
11:22:40 25 Is that right?

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11:22:40 1 A. Yes.

11:22:41 2 Q. And in those -- strike that.

11:22:44 3 In that paper, you describe the
11:22:46 4 procedures that one undertakes to use an event
11:22:51 5 study in litigation. Is that right?

11:22:53 6 A. That, as a general, high-level
11:22:58 7 characterization, that's fair enough.

11:23:00 8 Q. And when describing in that paper
11:23:04 9 the procedures that one undertakes to use an event
11:23:08 10 study in litigation, did you include within that
11:23:10 11 description all steps that you would consider
11:23:12 12 necessary to undertake a proper event study for
11:23:15 13 the purposes of litigation?

11:23:16 14 A. The purposes of litigation is a
11:23:18 15 pretty broad category. I described how event
11:23:25 16 studies are -- how single-firm event studies are
11:23:30 17 typically employed in securities litigation, but
11:23:36 18 your phrase "for purposes of litigation" is
11:23:40 19 pretty -- it covers a lot of ground.

11:23:44 20 So I wouldn't want to -- I
11:23:45 21 certainly wouldn't want to say that I included in
11:23:48 22 that writing a -- any -- every way an event study
11:23:53 23 could meaningfully and validly be used for
11:23:56 24 purposes of litigation.

11:24:00 25 Depending -- how an event study is

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11:24:02 1 used depends on exactly what is at issue. And I
11:24:08 2 was writing about a particular context, which I
11:24:12 3 believe I set forth in -- when I was writing about
11:24:17 4 single-firm event studies in securities cases, for
11:24:22 5 measuring the effect, say, of a -- for quantifying
11:24:31 6 the effect of a particular disclosure.

11:24:38 7 For -- I mention that because that
11:24:39 8 is an example that distinguishes the event studies
11:24:46 9 that I was writing about in litigation, for
11:24:48 10 example, from the event study that -- and this is
11:24:50 11 just as an example -- distinguishes it from the
11:24:54 12 event study that Dr. [REDACTED] performed in this case
11:24:57 13 in which he nowhere quantifies the effect on price
11:25:04 14 of any event. He doesn't report such a thing.

11:25:11 15 That just goes to the point -- just
11:25:14 16 to be clear on what I'm answering, that goes to my
11:25:16 17 point that different event studies are conducted
11:25:20 18 in different ways for answering different
11:25:22 19 questions.

11:25:26 20 Q. Let me pose a hypothetical. Let's
11:25:32 21 say you've conducted an event study and you
11:25:33 22 observe an abnormal price reaction on each of the
11:25:37 23 news days in question. And let's further say that
11:25:39 24 you also observe abnormal price reactions on days
11:25:42 25 on which there was no news event in question.

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11:25:44 1 Does the existence of abnormal
11:25:48 2 price reactions on the no-news days change your
11:25:50 3 opinion about the observed price reactions on the
11:25:53 4 news days?

11:25:54 5 MR. FIGEL: Objection.

11:25:54 6 A. That would depend on what opinion I
11:25:59 7 was expressing.

11:26:04 8 Q. Let's say you were asked to
11:26:06 9 determine whether there was any effect of the
11:26:11 10 news -- whether there was any
11:26:13 11 statistically-significant relationship between the
11:26:13 12 no-news days and price movement -- sorry. Strike
11:26:13 13 that.

11:26:19 14 Let's say you were asked to
11:26:20 15 determine whether there was a price effect caused
11:26:25 16 by the news event.

11:26:26 17 MR. FIGEL: Objection.

11:26:39 18 A. The -- okay. So that sounds very
11:26:45 19 much like a standard litigation format event study
11:26:56 20 which, as I've testified, is a little different
11:26:57 21 from what Dr. [REDACTED] did in the present case, which
11:27:00 22 I understand is what all of this is about.

11:27:03 23 That's a question that can be
11:27:05 24 answered, narrowly formulated as it -- as you have
11:27:14 25 formulated it, by computing a cumulative abnormal

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11:27:20 1 return and a T statistic for a cumulative abnormal
11:27:24 2 return over the -- for the event days. And one
11:27:33 3 could stop there.

11:27:34 4 Q. When you say "one could stop
11:27:37 5 there," does that mean that you would not need to
11:27:39 6 take the step of investigating abnormal price
11:27:45 7 reactions on no-news days?

11:27:48 8 MR. FIGEL: Objection.

11:27:49 9 A. The -- one could answer, if given
11:27:55 10 the narrow assignment that your question asks me
11:28:00 11 to assume as part of a hypothetical, if that were
11:28:03 12 the narrow assignment, you could answer it without
11:28:09 13 reference to test to the statistical significance
11:28:15 14 of abnormal returns on days other than the news
11:28:21 15 days.

11:28:24 16 And that typically is what
11:28:26 17 litigation-style event studies look like, the ones
11:28:33 18 that I have encountered, in any case.

11:28:53 19 Q. Dr. Marais, did you conduct an
11:28:56 20 event study in this case?

11:29:07 21 A. I would say no. There is a, kind
11:29:14 22 of, an event study in this case that is at the
11:29:22 23 core of my work in this case. But it's not my
11:29:24 24 event study, it's somebody else's event study.
11:29:27 25 It's Dr. [REDACTED] event study.

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11:29:30 1 Q. If you had been asked to conduct an
11:29:32 2 event study that assessed claims of any link
11:29:36 3 between Ripple news and XRP prices, would you have
11:29:42 4 been able to do so?

11:29:43 5 MR. FIGEL: Objection.

11:29:47 6 A. I can't think of a reason why I
11:29:49 7 would not have been able to do so. I never was
11:29:53 8 asked that assignment. And as you know, it's
11:30:05 9 unwise to give off-the-cuff answers to questions
11:30:09 10 like -- to large assignment questions like that
11:30:11 11 while sitting at the deposition table.

11:30:13 12 But I can't -- I would have needed
11:30:14 13 to know more than is in your question, obviously,
11:30:18 14 to determine ultimately if I could do that. But I
11:30:22 15 can't think of a reason why I would not be able to
11:30:24 16 do it.

11:30:36 17 Q. Have you -- strike that.

11:30:38 18 Do you have any expertise with
11:30:40 19 regard to digital assets?

11:30:42 20 A. "Digital assets" is a fuzzy
11:30:54 21 concept. It doesn't have bright line boundaries.
11:30:58 22 I am not, for example, a skilled trader with a
11:31:02 23 track record of earning large profits in digital
11:31:07 24 assets. So I have no -- I don't have that kind of
11:31:09 25 expertise.

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11:31:10 1 But there are many -- what I'm
11:31:12 2 trying to say is, there are many aspects to
11:31:16 3 digital assets, and one aspect of digital assets
11:31:19 4 is scholars in financial economics studying
11:31:24 5 digital assets. And they, as I'm sure you know,
11:31:28 6 they use statistical and, more specifically,
11:31:32 7 econometric methods.

11:31:34 8 And so to the extent that they use
11:31:36 9 methods that were inside my area of expertise,
11:31:39 10 that is the kind of expertise that I have. It's a
11:31:42 11 generalized expertise, but it does relate in
11:31:45 12 particular to certain studies of digital assets.

11:31:55 13 But with that qualification and
11:31:58 14 background, no, I would not -- I have never and I
11:32:00 15 would not describe myself as an expert in the area
11:32:03 16 of digital assets. All that I have just said is
11:32:09 17 that I have -- there are no bright lines that
11:32:12 18 divide digital assets from my areas. And in those
11:32:15 19 frontier regions, I do have expertise.

11:32:18 20 Q. Have you authored any publications
11:32:22 21 pertaining to digital assets?

11:32:24 22 A. No, I have not.

11:32:25 23 Q. Have you taught any courses that
11:32:27 24 cover the topic of digital assets?

11:32:29 25 A. No.

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11:32:30 1 Q. Have you taken any courses that
11:32:31 2 have covered the topic of digital assets?

11:32:35 3 A. I have not done that.

11:32:36 4 Q. Prior to this case, have you been
11:32:38 5 retained as an expert in any case involving
11:32:40 6 digital assets in any way?

11:32:41 7 A. No, I have not.

11:32:48 8 Q. Other than your work in this case,
11:32:49 9 have you ever conducted an event study involving
11:32:51 10 digital assets?

11:32:55 11 A. Even including my work in this
11:32:56 12 case, I have never conducted an event study.

11:33:06 13 Q. Are you offering any opinion on the
11:33:07 14 suitability of event study methodology to evaluate
11:33:13 15 the effects of disclosures on digital asset
11:33:16 16 prices?

11:33:17 17 MR. FIGEL: Objection.

11:33:24 18 A. I am offering no expert opinion in
11:33:28 19 this matter on that specific area. I have
11:33:35 20 questions. I have come to understand that it's
11:33:38 21 no -- there's no slam dunk simple answer.

11:33:43 22 But that -- that is an -- that
11:33:45 23 doesn't rise to the level of an expert opinion
11:33:48 24 that I'm offering in this case. And I express no
11:33:50 25 such opinion in my report.

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11:33:55 1 Q. Are you offering any opinion in
11:33:57 2 this case on the informational efficiency of the
11:34:02 3 XRP market?

11:34:03 4 A. Actually, no.

11:34:07 5 Q. Are you offering any opinion in
11:34:09 6 this case on the informational efficiency of the
11:34:13 7 market for any digital asset?

11:34:15 8 A. Again, no, I am not.

11:34:16 9 Q. Turning to Attachment C of LM-1,
11:34:21 10 your expert report. Is Attachment C to your
11:34:43 11 report a list of materials you considered in
11:34:45 12 preparing your report?

11:34:46 13 A. Yes.

11:34:46 14 Q. Did you personally review each of
11:34:51 15 the materials listed at Numbers 1 through 5 of
11:34:53 16 Attachment C?

11:34:54 17 A. Yes.

11:34:54 18 Q. Did defense counsel supply you with
11:34:57 19 the items listed in Attachment C?

11:35:00 20 MR. FIGEL: Start by answering yes
11:35:14 21 or no.

11:35:14 22 A. Some yes, some no.

11:35:15 23 Q. Which of the items listed on
11:35:20 24 Attachment C did defense counsel supply you with?

11:35:23 25 MR. FIGEL: Just identify by number

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11:35:26 1 on your Exhibit C, please.

11:35:27 2 A. 1, 3, and 5.

11:35:42 3 Q. You reviewed the Gerritsen paper
11:35:51 4 listed at Number 3. Is that right?

11:35:51 5 A. Yes.

11:35:51 6 Q. What, if anything, did you learn
11:35:55 7 from reading the Gerritsen paper?

11:35:57 8 A. That there's no precedent in it for
11:36:01 9 the kind of analysis that -- for the specific kind
11:36:06 10 of analysis that Dr. [REDACTED] performed in the course
11:36:10 11 of his purported event study in this matter.

11:36:16 12 There are precedents for portions of it, but not
11:36:20 13 for the core method.

11:36:25 14 MR. FIGEL: Mr. Sylvester, I
11:36:27 15 just -- I mean, maybe to avoid you asking
11:36:29 16 questions, can I just clarify whether he
11:36:32 17 meant to say Number 3 as opposed to Number 2
11:36:37 18 with respect to the information that was
11:36:37 19 provided by counsel?

11:36:38 20 MR. SYLVESTER: Oh, sure. That's
11:36:39 21 fine.

11:36:39 22 Q. Do you recall, Dr. Marais, if it
11:36:42 23 was, in fact, Number 2 that was provided by
11:36:44 24 counsel and not Number 3?

11:36:45 25 A. I recall clearly that what I meant

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11:36:47 1 to say when asked that question was 1, 2, and 5.

11:36:52 2 And if I said 1, 3, and 5, I misspoke.

11:36:55 3 Q. Going back to your reading of the
11:36:59 4 Gerritsen paper, is it your testimony that the
11:37:07 5 Gerritsen paper provides some precedent for
11:37:14 6 Dr. [REDACTED] work in this case?

11:37:15 7 A. Yes.

11:37:15 8 Q. What precedent does the Gerritsen
11:37:19 9 paper provide for Dr. [REDACTED] work in this case?

11:37:28 10 A. To be crisp about that, I'd
11:37:31 11 probably have to look at a copy of the Gerritsen
11:37:34 12 paper, which I did not commit to memory. So I
11:37:38 13 don't have a verbatim recall.

11:37:39 14 The measurement of profiting from
11:37:47 15 predictions requires I -- some benchmark modeling
11:37:50 16 for how profits were measured. And it may be -- I
11:37:57 17 believe that one or -- one or the other of these
11:37:59 18 articles -- it may be the Gerritsen article -- did
11:38:02 19 use the most basic form of index model, the
11:38:09 20 constant mean return model from -- that Dr. [REDACTED]
11:38:13 21 also used.

11:38:19 22 It did not, however, use in any
11:38:22 23 way, shape, or form the hypergeometric
11:38:27 24 distribution analysis that Dr. [REDACTED] also relies
11:38:36 25 on. In fact, that -- the analysis that Dr. [REDACTED]

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11:38:38 1 relies on for his ultimate conclusions.

11:38:47 2 Q. How did your reading of the
11:38:48 3 Gerritsen paper inform your opinions here, if it
11:38:52 4 did?

11:38:55 5 A. Only as background. I'm not -- I'm
11:38:58 6 not relying on anything in Gerritsen as a basis
11:39:03 7 for any opinion that I express in my report.

11:39:09 8 Q. What, if anything, did you learn
11:39:11 9 from reading the Joo, J-o-o, et al., paper listed
11:39:15 10 in Number 4?

11:39:16 11 A. I found a description of it in the
11:39:29 12 generalized rank test that to which Dr. [REDACTED]
11:39:32 13 refers. I also found in it some degree of
11:39:45 14 precedent for using index models, using an index
11:39:45 15 model.

11:39:54 16 And I don't recall if Joo, et al.,
11:39:58 17 may, in fact, be the source where I found a
11:40:01 18 precedent for the constant mean return model,
11:40:04 19 which is Dr. [REDACTED] Model 1. But in particular,
11:40:10 20 Dr. [REDACTED] cites Joo in at least one -- I think he
11:40:15 21 cites -- has multiple citations to Joo.

11:40:19 22 But one topic for which he cites
11:40:22 23 Joo is the generalized rank test that he applies.
11:40:26 24 And so I was interested in the nature of that
11:40:30 25 particular generalized rank test.

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11:41:01 1 (Exhibit LM-10, Applied Economics
11:41:01 2 article by Mohammad Hashemi Joo, marked for
11:41:04 3 identification, as of this date.)

11:41:04 4 Q. I'm going to hand you, Dr. Marais,
11:41:06 5 what's been marked as LM-10. Once you've had a
11:41:21 6 chance to look at it, my question is just: Is
11:41:24 7 LM-10 a copy of the Joo article that you cite in
11:41:28 8 your report?

11:41:30 9 A. (Document review.)

11:41:45 10 Yes.

11:41:48 11 Q. And this article in LM-10 appeared
11:41:51 12 in Applied Economics. Is that right?

11:41:53 13 A. Yes.

11:41:53 14 Q. Do you have any views on the
11:41:55 15 reputation of Applied Economics in the economics
11:41:58 16 community?

11:41:58 17 A. I do not.

11:41:59 18 Q. Do you know if the Joo article was
11:42:01 19 peer reviewed?

11:42:02 20 A. I assume so but I don't know that
11:42:05 21 to be a fact.

11:42:08 22 Q. In part, the Joo paper discusses
11:42:11 23 event studies conducted with the respect
11:42:15 24 of -- strike that.

11:42:16 25 In part, Joo's paper describes

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11:42:19 1 event studies conducted with respect to the effect
11:42:21 2 of certain announcements on the price of three
11:42:26 3 digital assets. Is that right?

11:42:29 4 A. I have to remind myself if there
11:42:33 5 are really three digital assets.

11:42:35 6 Q. If it's helpful, I'm looking at
11:42:38 7 page -4796 under the subhead "Data and methodology
11:42:47 8 sample."

11:42:52 9 A. Got it.

11:42:54 10 (Document review.)

11:43:09 11 I'm also looking at Table 2 on page
11:43:12 12 -4800 where some results are -- some summary
11:43:16 13 statistics are reported for the same three
11:43:25 14 cryptocurrencies and also the tables around major
11:43:30 15 events that I see on pages -4802, and all of which
11:43:40 16 refer to Bitcoin, Ripple, and Ethereum.

11:43:49 17 So I think by now I've satisfied
11:43:51 18 myself that the answer to your question is yes.

11:43:54 19 Q. Do you understand the reference in
11:43:57 20 the JOO article to Ripple to be a reference to
11:44:02 21 XRP?

11:44:02 22 A. That's how I read it when I saw it.

11:44:04 23 Q. What was the basis for your
11:44:09 24 understanding that Joo's reference to Ripple was a
11:44:14 25 reference to XRP when you read the article?

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11:44:14 1 A. Initially and primar- -- and
11:44:22 2 primarily, it was that by the time I saw this
11:44:24 3 article, I was familiar with seeing references to
11:44:30 4 Ripple and XRP occurring together.

11:44:33 5 As I testified earlier today, I do
11:44:36 6 not have a fresh recall as I sit here of whether
11:44:42 7 the article actually confirmed that expressly.
11:44:46 8 But I don't recall learning anything from it that
11:44:48 9 changed my understanding.

11:44:53 10 Q. Did you first read the Joo article
11:44:56 11 after your retention in this case?

11:44:58 12 A. Yes.

11:45:02 13 Q. In reading this Joo article, did
11:45:05 14 you have any critique of the author's design of
11:45:10 15 the event studies described?

11:45:12 16 MR. FIGEL: Objection.

11:45:16 17 A. The test statistics that these
11:45:20 18 authors used are part of the design of their event
11:45:23 19 study. And I have some -- I do have some
11:45:26 20 questions about that. But because I didn't need
11:45:36 21 to go to delve into the background of this article
11:45:42 22 and read yet other articles, I never fully
11:45:45 23 resolved those questions.

11:45:46 24 For the purposes of my assignment
11:45:48 25 in this case and for the opinions that I actually

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11:45:51 1 express in my report, I didn't need to -- to delve
11:45:56 2 behind the questions. So criticism, potential
11:46:02 3 criticism, depending on the questions that
11:46:04 4 occurred to me.

11:46:09 5 Q. Did you review the portion of the
11:46:11 6 Joo paper regarding selection of major events,
11:46:14 7 starting on page -4797?

11:46:31 8 A. Only in a cursory way.

11:46:34 9 Q. Do you recall having any critique
11:46:37 10 of the Joo paper's authors' design of their
11:46:41 11 selection of major events for their event study?

11:46:44 12 MR. FIGEL: Objection.

11:46:45 13 A. I don't recall focusing enough on
11:46:54 14 the section -- their section on the selection of
11:46:59 15 their events, since that isn't what Dr. [REDACTED] cited
11:47:02 16 this article for, to develop a basis for
11:47:09 17 endorsement or criticism.

11:47:18 18 Q. Have you finished all of the work
11:47:21 19 you were assigned to do in this case?

11:47:23 20 A. Yes, in the sense that I have no
11:47:26 21 pending projects or outstanding assignments, so
11:47:37 22 that it's fair to say I have no plans to do
11:47:39 23 additional work as I sit here today.

11:47:42 24 If I am asked to do anything
11:47:45 25 additional, I would certainly entertain such a

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11:47:47 1 request if it came to me.

11:47:49 2 Q. Have you come to learn any
11:47:50 3 information since you signed the report at LM-1
11:47:55 4 that in any way affects the opinions set forth in
11:48:00 5 your report?

11:48:00 6 A. No. None that I can think of at
11:48:09 7 least.

11:48:09 8 Q. Who wrote the text of your report
11:48:12 9 at LM-1?

11:48:23 10 A. It was a collaborative writing
11:48:26 11 effort in which Dr. Asinski provided portions of
11:48:39 12 the -- of a draft text which I then, in most
11:48:45 13 cases, thoroughly and extensively rewrote so that
11:48:52 14 the collaboration ended with a document that is
11:48:55 15 entirely my own.

11:48:59 16 Q. Do you recall any portions of your
11:49:01 17 report that you did not, as you describe it,
11:49:05 18 thoroughly and extensively rewrite?

11:49:06 19 A. No.

11:49:07 20 Q. Is there anyone else who assisted
11:49:10 21 with the drafting of your report other than
11:49:13 22 Dr. Asinski?

11:49:14 23 A. I've already mentioned Mr. Narsid
11:49:23 24 Golic, who performed various tasks in support of
11:49:28 25 Dr. Asinski. I can't know -- I don't know whether

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11:49:32 1 Mr. Golic had a role in creating material
11:49:36 2 delivered to me by Dr. Asinski. But except for
11:49:41 3 that, I can't think of anybody.

11:49:43 4 Q. Is there any portion of your report
11:49:45 5 where you wrote the first draft?

11:49:55 6 A. I can't answer that from memory,
11:49:58 7 but I would be happy to page through the report
11:50:00 8 and tell you if I recognize such a section.

11:50:05 9 Q. Sure. Why don't you go ahead.

11:50:12 10 A. (Document review.)

11:50:13 11 Much of the boilerplate on
11:50:15 12 introduction and background, I certainly wrote the
11:50:17 13 first draft. And I didn't write it for this
11:50:21 14 engagement. I've used similar language elsewhere.
11:50:40 15 It seems to me Section 2 is mostly my writing, as
11:50:46 16 a first draft, I mean. All of it is entirely my
11:50:49 17 writing but I drafted that.

11:51:07 18 Paragraph 11, I wrote the first
11:51:08 19 draft. Paragraph 13 looks to me like something
11:51:24 20 that I drafted. Paragraph 17 looks to me like
11:51:31 21 something that I drafted. Paragraph 20 and 21
11:52:05 22 were likely my work as in creating the initial
11:52:08 23 draft.

11:52:20 24 I am -- I created the first draft
11:52:28 25 of tables, like Tables 2 and 3, but certainly the

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11:52:43 1 insertion of the bulk of the numbers into those
11:52:46 2 tables, that was done -- I didn't do that from the
11:52:52 3 source computer outputs that we used for those.

11:53:08 4 Paragraph 25 looks like something I
11:53:10 5 drafted. Paragraph 30 looks like something I
11:53:18 6 wrote the first draft of.

11:53:20 7 So I -- while Dr. Asinski and
11:53:23 8 others assisting me had a substantial role, it
11:53:29 9 looks like I -- and helped with comments -- it
11:53:32 10 looks like to me as if the -- much of the
11:53:36 11 substance of this document I drafted.

11:53:41 12 Q. You mentioned that you likely
11:53:42 13 prepared the first draft of Tables 2 and 3 and
11:53:45 14 others input the numbers. Is that right?

11:53:49 15 A. With a few numbers but that the
11:53:52 16 bulk of the numbers, I testified, were not
11:53:55 17 inserted by me.

11:54:01 18 Q. Right. Are you nevertheless
11:54:03 19 familiar with the numbers that appear in Tables 2
11:54:05 20 and 3?

11:54:05 21 A. Yes, I am.

11:54:05 22 Q. Other than Dr. Asinski and possibly
11:54:08 23 Mr. Golic, was there anyone else who assisted with
11:54:11 24 the drafting of your report?

11:54:12 25 A. No.

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11:54:12 1 Q. Did counsel provide comments on
11:54:15 2 your report?

11:54:16 3 A. Yes.

11:54:16 4 Q. Which counsel?

11:54:18 5 A. Mr. Figel and possibly, for all I
11:54:26 6 know, anybody working with him.

11:54:30 7 Q. Did counsel draft any part of your
11:54:33 8 report?

11:54:34 9 MR. FIGEL: You can answer yes or
11:54:35 10 no.

11:54:35 11 A. No.

11:54:38 12 Q. Did you incorporate counsel's
11:54:40 13 comments into the final version of your report?

11:54:46 14 A. Where counsel's comments seemed to
11:54:49 15 me to be useful and/or to suggest useful ideas or
11:54:58 16 changes, I made improvements to the language
11:55:02 17 prompted by counsel's comments, and where they did
11:55:04 18 not, I did not.

11:55:15 19 Q. Item 5 of Attachment C to your
11:55:19 20 report is [REDACTED] electronic backup. Is that right?

11:55:28 21 A. Yes.

11:55:28 22 Q. Did you personally review the [REDACTED]
11:55:36 23 electronic backup?

11:55:37 24 A. I reviewed at least portions of it.
11:55:41 25 I had access to the whole of it, but I won't say

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11:55:44 1 that I personally scrutinized every part of it.

11:55:51 2 Q. In your review of the portions of
11:55:54 3 Dr. [REDACTED] electronic backup that you reviewed, did
11:55:59 4 you find any errors?

11:56:04 5 A. None that I can recall. I'm fairly
11:56:11 6 sure I would remember since all of this is quite
11:56:14 7 recent. I did not find errors.

11:56:16 8 Q. Did you instruct others to review
11:56:20 9 Dr. [REDACTED] electronic backup?

11:56:23 10 A. Yes.

11:56:23 11 Q. What instructions, if any, did you
11:56:27 12 provide them as to their review?

11:56:34 13 A. To explore the backup material in
11:56:43 14 order to report back to me its nature, to
11:56:51 15 replicate the calculations performed by Dr. [REDACTED]
11:56:56 16 and verify that when using the inputs, the input
11:57:00 17 data provided by him, that the calculations
11:57:07 18 described by him actually produced the outputs
11:57:10 19 reported by him.

11:57:14 20 So that would be a routine process
11:57:16 21 of replication, of auditing the work, to confirm
11:57:22 22 that the inputs -- to confirm at least by checking
11:57:33 23 a number of individual input data items that the
11:57:37 24 inputs actually did appear to come from the, I
11:57:44 25 think, coin-based source, whatever the name of the

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11:57:48 1 source is that Dr. [REDACTED] reports, and that we could
11:57:55 2 see the same numbers looking at those sources; and
11:58:02 3 then to report back to me that -- whether or not
11:58:10 4 we were able replicate and thereby fully
11:58:18 5 understand what it is that Dr. [REDACTED] had done.

11:58:20 6 Q. Were you able to replicate
11:58:25 7 Dr. [REDACTED] calculations?

11:58:25 8 A. Yes.

11:58:26 9 Q. From the review that you just
11:58:28 10 described, did anyone on your team discover any
11:58:30 11 errors in Dr. [REDACTED] backup files?

11:58:34 12 MR. FIGEL: Objection.

11:58:34 13 A. I recall none.

11:58:35 14 Q. Are you aware that defense counsel
11:58:40 15 in this case produced a set of files entitled
11:58:45 16 "Marais Backup" to the SEC?

11:58:47 17 A. Yes.

11:58:47 18 Q. Did you prepare the materials
11:58:49 19 contained within Marais Backup?

11:58:52 20 A. Yes, at least in the sense that the
11:58:56 21 files were created under my direction by the
11:59:00 22 Compass Lexecon staff whose names I have already
11:59:02 23 testified about.

11:59:03 24 Q. What do the Marais Backup files
11:59:05 25 contain?

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11:59:05 1 A. They contain computer code used to
11:59:15 2 produce the results reported in my own report
11:59:26 3 that -- that is two flavors of computer code.

11:59:30 4 They contain input files which are
11:59:34 5 very largely derived and may, in fact, come
11:59:37 6 straight from Dr. [REDACTED] own production in this
11:59:43 7 case.

11:59:43 8 They contain intermediate files
11:59:48 9 that were produced as -- in the course of
11:59:54 10 executing the computer code produced in that
11:59:58 11 backup, they contain output files. Some of those
12:00:04 12 outputs, if I remember correctly, are in
12:00:08 13 relatively unfriendly computer output-like format.

12:00:14 14 Other outputs are in the form of
12:00:17 15 Excel spreadsheets, which were the basis of
12:00:21 16 exhibits to my report.

12:00:28 17 So I think that fairly fully
12:00:30 18 describes what is in those backup materials. And
12:00:37 19 they -- in the form I believe they were delivered,
12:00:40 20 they -- the components are labeled. They're in
12:00:44 21 file folders. And those folders are labeled to
12:00:47 22 make it fairly easy to understand the relation of
12:00:55 23 the computer files we produced to the description
12:00:57 24 that I've just given.

12:00:58 25 Q. Did you do anything to check the

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12:01:00 1 accuracy of the materials contained within your
12:01:02 2 backup files?

12:01:03 3 MR. FIGEL: Objection.

12:01:03 4 A. I routinely -- I followed my
12:01:12 5 routine practice of asking about whether the
12:01:19 6 materials in the backup files tied to the exhibits
12:01:28 7 where there was -- in my report and whether we had
12:01:35 8 reason to think that the calculations that we had
12:01:39 9 performed were performed accurately.

12:01:45 10 And in part, we verified -- I had
12:01:50 11 that verified by confirming that we were able to
12:01:57 12 produce -- to reconcile to numbers reported by
12:02:02 13 Dr. [REDACTED] or appearing in Dr. [REDACTED] backup
12:02:05 14 materials, even though the chain of computer steps
12:02:15 15 that we were using were not identical to the set
12:02:19 16 of steps used by Dr. [REDACTED]. So yes.

12:02:31 17 Q. You said in part that you followed
12:02:32 18 your routine practice of asking about whether the
12:02:35 19 materials in the backup files tied to the exhibits
12:02:40 20 in your report.

12:02:41 21 Who did you ask?

12:02:41 22 A. Dr. Asinski.

12:02:42 23 Q. Okay.

12:02:56 24 THE WITNESS: I would like to take
12:02:58 25 a break at some point soon. It doesn't have

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12:03:01 1 to be at this exact moment.

12:03:03 2 MR. FIGEL: Now is fine by me.

12:03:06 3 Let's go off the record.

12:03:10 4 THE VIDEOGRAPHER: The time is
5 12:02 p.m. This concludes Media 2. Off the
6 record.

7 (Lunch recess taken from 12:02 p.m.
8 to 12:58 p.m.)

9 - - -

10 A F T E R N O O N S E S S I O N

11 - - -

12 (Time noted: 12:58 p.m.)

13 - - -

14 THE VIDEOGRAPHER: The time now is
15 12:58 p.m. This begins Media 3. On the
16 record.

17 M. L A U R E N T I U S M A R A I S,
18 resumed and testified further as
19 follows:

20 CONTINUED EXAMINATION

21 BY MR. SYLVESTER:

12:59:18 22 Q. Dr. Marais, earlier today you
12:59:20 23 testified that, prior to your retention as an
12:59:24 24 expert witness in this case, you had been retained
12:59:25 25 about three months ago by Kellogg Hansen. Is that

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12:59:32 1 right?

12:59:32 2 A. Yes.

12:59:32 3 Q. Did that retention have anything to
12:59:34 4 do with this case?

12:59:35 5 A. No.

12:59:37 6 Q. Earlier today I believe you
12:59:38 7 testified that Dr. [REDACTED] study as expressed in his
12:59:43 8 expert report is a nonstandard analysis. Is that
12:59:47 9 right?

12:59:47 10 A. Yes.

12:59:47 11 Q. And I believe that you also
12:59:49 12 testified that you could not rule out that there
12:59:51 13 was precedent for that nonstandard analysis. Is
12:59:56 14 that right?

12:59:56 15 A. Correct.

12:59:57 16 Q. Did you look for any such
12:59:58 17 precedent?

01:00:06 18 A. Yes.

01:00:06 19 Q. What did you find, if anything?

01:00:07 20 A. Nothing.

01:00:08 21 Q. I believe you testified earlier
01:00:09 22 that the Joo and Gerritsen papers might provide
01:00:14 23 some precedent for some portions of Dr. [REDACTED]
01:00:18 24 study. Is that right?

01:00:18 25 A. Yes.

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01:00:19 1 Q. And what precedent do either of
01:00:21 2 those two papers provide for Dr. [REDACTED] study?

01:00:28 3 A. The use of some kind of index
01:00:31 4 model, even if it is the -- the no index model
01:00:34 5 that Dr. [REDACTED] calls the constant mean returns
01:00:38 6 model. But at least the use of some kind of index
01:00:41 7 model for estimating a normal return on a
01:00:49 8 cryptocurrency in some test period.

01:01:00 9 Q. Is there any other precedent that
01:01:02 10 either of those two papers provide for Dr. [REDACTED]
01:01:09 11 study?

01:01:09 12 A. Not in a methodological sense.
01:01:11 13 They both have superficial characteristics but --
01:01:15 14 that don't go to the method that resembled
01:01:22 15 Dr. [REDACTED]. They both -- they both have to do with
01:01:24 16 cryptocurrencies of a -- for instance.

01:01:26 17 But that's what I call superficial.
01:01:28 18 That doesn't -- that's not enough to make them
01:01:30 19 precedent, a methodological precedent.

01:01:37 20 Q. When were you retained in the Rhame
01:01:40 21 case we discussed earlier?

01:01:46 22 A. In the -- at some point in the
01:01:48 23 first half of 2020, maybe around the end of the
01:01:51 24 first quarter of 2020.

01:01:57 25 Q. And when was it that your expert

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01:02:00 1 report was provided to the other side in Rhame?

01:02:03 2 A. In either late October or early
01:02:11 3 November of 2021.

01:02:22 4 Q. Who retained you in the Rhame
01:02:26 5 matter?

01:02:26 6 A. I was retained through counsel,
01:02:28 7 counsel being Alston & Bird, on behalf of
01:02:33 8 defendant Tyson Rhame.

01:02:38 9 Q. In your professional career, and
01:02:41 10 setting aside Rhame, was there any occasion in
01:02:43 11 which you endeavored to assess whether there was a
01:02:47 12 link between a news event and a reaction in volume
01:02:51 13 and you concluded there was no such link, based in
01:02:55 14 whole or in part, on your observation of abnormal
01:02:59 15 reactions in volume on days with no-news events?

01:03:01 16 MR. FIGEL: Objection.

01:03:02 17 A. I testified at some length this
01:03:19 18 morning about the passage of time since I
01:03:23 19 performed event studies as a routine part of my
01:03:36 20 consulting practice. And I testified that,
01:03:40 21 because really 20 or more years have passed, I
01:03:43 22 can't today testify with fresh recollection or
01:03:46 23 specificity about the content of those event
01:03:51 24 studies.

01:03:51 25 So I can only say I don't -- I do

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01:04:00 1 not recall the nature of everything that I did
01:04:02 2 when I last did this kind of -- most recently did
01:04:08 3 work that seems to be covered by your question.

01:04:19 4 Q. So fair to say, other than Rhame,
01:04:22 5 sitting here today, you cannot think of any other
01:04:24 6 occasion that would be responsive to my previous
01:04:28 7 question?

01:04:28 8 MR. FIGEL: Objection.

01:04:28 9 A. I can think of many occasions that
01:04:37 10 could be covered by your previous question, but
01:04:39 11 none where my -- none that I would have thought to
01:04:45 12 describe in that way.

01:04:53 13 But your question is broad enough
01:04:55 14 that there are matters that I would describe
01:04:57 15 differently if asked to describe what they were
01:04:59 16 about, but upon reflection might well recognize as
01:05:04 17 fitting into the category you are asking me about.

01:05:08 18 Q. Can you describe, setting aside
01:05:13 19 Rhame, another occasion in which you endeavored to
01:05:16 20 assess whether there was a link between a news
01:05:18 21 event and a reaction in volume and you concluded
01:05:22 22 there was no such link, based in whole or in part,
01:05:25 23 on your observation of abnormal reactions in
01:05:30 24 volume on days with no-news events?

01:05:33 25 MR. FIGEL: Objection.

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01:05:33 1 A. I've already testified that I
01:05:42 2 can't -- that concerning my work on event studies
01:05:44 3 per se, it's too long ago. I don't -- I don't
01:05:47 4 have that recollection.

01:05:48 5 I've also given you -- I've also
01:05:51 6 pointed out that your characterization is broad
01:05:54 7 enough to cover situations that wouldn't -- that
01:05:58 8 might not have been labeled event studies per se.

01:06:08 9 And because they were not labeled
01:06:10 10 event studies per se, I would need to remind
01:06:14 11 myself, however briefly, of the nature of what the
01:06:17 12 work was.

01:06:21 13 And so with that in mind, I've
01:06:23 14 picked up my report, and I've turned to Attachment
01:06:26 15 B. And I would like to run my finger down these
01:06:35 16 matters and just think about what they involved
01:06:38 17 and whether they fit under the heading of what you
01:06:40 18 were asking me about.

01:06:42 19 Q. Please go ahead.

01:06:43 20 A. (Document review.)

01:08:55 21 The -- Item 14 on my -- on the list
01:08:57 22 is called Cotromano v United Technologies and
01:09:03 23 Adinolfe versus United Technologies. That seems
01:09:08 24 to me to be an example of the second kind of case
01:09:15 25 that I mentioned.

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01:09:17 1 I -- I identified two categories.
01:09:21 2 One was work that I had done on event studies,
01:09:23 3 which is now too long ago for me to recall clearly
01:09:26 4 what it was.

01:09:29 5 Cotromano is also some time ago.
01:09:32 6 But my recollection of Cotromano is that it falls
01:09:35 7 into the second category, where there is something
01:09:37 8 that one can recognize as a kind of event study,
01:09:41 9 even though not called that in the context.

01:09:46 10 And that fits the rest of the
01:09:47 11 characterization that you provided. And I -- as
01:09:53 12 it's now coming back to mind, I think that's not
01:09:58 13 the only one.

01:10:04 14 I think Pinares versus United
01:10:13 15 Technologies in Item 17 had something of that same
01:10:14 16 character.

01:10:23 17 (Document review.)

01:10:33 18 The -- there are aspects of the
01:10:38 19 opiate litigation identified in Item 22 that fit
01:10:42 20 that character. The same would hold in 23, also
01:11:01 21 26, also 34, also 38, also 40, also 44.

01:12:12 22 And, of course, this list begins in
01:12:16 23 January of 2017 because it's meant to cover only a
01:12:22 24 full four-year period. And so were we looking at
01:12:29 25 older versions of this list, there might well be

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01:12:33 1 others that are even better candidates than what
01:12:40 2 I've identified for you on this list.

01:12:43 3 Q. In any of the cases that you just
01:12:45 4 identified, was it your assignment to evaluate the
01:12:49 5 link between a news event and the price of a
01:12:53 6 security?

01:12:56 7 MR. FIGEL: Objection.

01:12:56 8 A. No.

01:13:02 9 Q. In any of the cases that you just
01:13:04 10 identified, was it your assignment to evaluate the
01:13:07 11 link between a news event and the volume of a
01:13:10 12 securities trading?

01:13:12 13 MR. FIGEL: Objection.

01:13:12 14 A. Certainly the volume of something,
01:13:16 15 but not the volume of securities necessarily.

01:13:20 16 Q. Was your assignment for any of the
01:13:32 17 cases you just identified substantially identical
01:13:38 18 for any of them?

01:13:39 19 MR. FIGEL: Objection.

01:13:39 20 A. Identical to what?

01:13:44 21 Q. That's a fair point. I'll give you
01:13:46 22 an example so you know what I mean.

01:13:48 23 Assignments 34 and 44 both appear
01:13:52 24 to involve the client JUUL Labs. Were you
01:13:55 25 retained by JUUL Labs?

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01:13:57 1 A. Yes.

01:13:57 2 Q. Was your assignment in 34 and 44
01:14:00 3 substantially identical?

01:14:14 4 MR. FIGEL: Objection.

01:14:14 5 A. (Document review.)

01:14:21 6 There was certainly an overlap
01:14:25 7 between 30 -- 33, 34, and 44. To the best of my
01:14:33 8 recollection, sitting here, though, the
01:14:35 9 differences were so substantial that I would not
01:14:37 10 call the assignments substantially identical.

01:14:43 11 Q. Let's start with 14. What opinion
01:14:45 12 did you offer in the Cotromano case?

01:15:13 13 A. The opinion that I offered in
01:15:15 14 Cotromano had to do with the statistics
01:15:19 15 surrounding a putative -- a putative cancer
01:15:32 16 cluster in an area of Florida -- in a subdivision
01:15:41 17 of Florida that was near a -- somewhat near a
01:15:48 18 Pratt & Whitney jet engine production and research
01:15:53 19 facility.

01:16:02 20 My opinion was about the
01:16:04 21 investigation that had been performed by the State
01:16:07 22 of Florida and the federal EPA on the causation,
01:16:17 23 or lack thereof, of the pediatric brain cancers
01:16:26 24 that had been observed in the acreage subdivision
01:16:29 25 and the presence of the plant.

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01:16:40 1 Q. Did you provide any opinion related
01:16:43 2 to causation that you just described?

01:16:45 3 A. Yes.

01:16:45 4 Q. What was your opinion?

01:16:46 5 A. That it had -- that it had not been
01:16:53 6 established and that despite a -- and a fairly
01:17:02 7 intensive investigation, no link had ever been --
01:17:07 8 no actual link had ever been documented.

01:17:11 9 Q. What is it about the work that you
01:17:13 10 performed in the Cotromano case that you believe
01:17:18 11 may be responsive to my question as to whether in
01:17:23 12 your professional career there was any occasion in
01:17:25 13 which you endeavored to assess whether there was a
01:17:28 14 link between a news event and a reaction in volume
01:17:32 15 and you concluded there was no such link, based in
01:17:36 16 whole or in part, on your observation of abnormal
01:17:41 17 returns in volume on days with no-news events?

01:17:46 18 MR. FIGEL: Objection.

01:17:46 19 A. My -- I -- my answer to that
01:17:47 20 question was that this case involved such a thing.
01:17:49 21 As it turns out, the opinions I ultimately
01:17:52 22 expressed did not involve my work on that
01:17:58 23 question.

01:17:59 24 But that question did arise in that
01:18:06 25 case in the form of the disclosure of the

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01:18:10 1 investigation itself, various disclosures
01:18:22 2 concerning the discovery of the cluster, various
01:18:29 3 disclosures concerning the outcome of the
01:18:32 4 investigation by the various state and federal
01:18:34 5 authorities, and the prices of housing. And I --
01:18:44 6 there may even have been a volume question in
01:18:49 7 terms of turnover.

01:18:50 8 So there were news releases
01:18:52 9 concerning this event in the vicinity of the area.
01:18:56 10 And there were questions about the price of
01:18:58 11 housing.

01:19:01 12 Q. Did your expert work address those
01:19:03 13 questions regarding price of housing?

01:19:05 14 A. I did initially, yes.

01:19:07 15 Q. And -- but you didn't ultimately
01:19:09 16 end up offering an opinion about any questions
01:19:11 17 related to price of housing. Is that right?

01:19:13 18 A. That is correct.

01:19:15 19 Q. Okay. Limiting your answers only
01:19:25 20 to work that you did that was ultimately presented
01:19:28 21 in an expert report, and setting aside Cotromano,
01:19:34 22 which we just discussed, which of Items 17, 22,
01:19:40 23 23, 26, 34, 38, 40, and 44 do you view as
01:19:45 24 responsive to my question as to whether there was
01:19:46 25 any occasion in which you endeavored to assess

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01:19:50 1 whether there was a link between a news event and
01:19:52 2 a reaction in volume and you concluded there was
01:19:54 3 no such link, based in whole or in part, on your
01:19:57 4 observation of abnormal returns in volume on days
01:20:03 5 with no-news events?

01:20:04 6 MR. FIGEL: Objection.

01:20:05 7 A. (Document review.)

01:20:44 8 In work that was -- that I
01:20:45 9 ultimately did include in what I produced, there
01:20:52 10 is -- there's some question on my mind as to
01:20:54 11 whether the declaration of an epidemic of opioid
01:21:01 12 abuse is a news event or not.

01:21:08 13 It's -- it is a news event. It is
01:21:10 14 also a very substantive event. But it is at least
01:21:15 15 news that the administration, the national
01:21:18 16 administration has declared it to be an epidemic.
01:21:26 17 There was an element of that in Item 22.

01:21:28 18 Q. What opinion did you provide in
01:21:34 19 connection with Item 22?

01:21:35 20 A. That none of the events on the
01:21:38 21 timeline of that case, including the disclosure
01:21:44 22 and announcement of -- that the problems
01:21:51 23 associated with opioids are now viewed as an
01:21:56 24 epidemic and a crisis, a national emergency,
01:22:00 25 public health emergency, appear to be related in a

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01:22:08 1 documentable way to the trajectory of sales of
01:22:13 2 Johnson & Johnson products or of opioids
01:22:19 3 generally.

01:22:24 4 Q. What abnormal reactions did you
01:22:29 5 observe in connection with your work in Item 22
01:22:35 6 that impacted your opinion in that case?

01:22:37 7 MR. FIGEL: Objection.

01:22:42 8 A. Movements in the trajectory that
01:22:48 9 were statistically large increases or changes,
01:22:55 10 turning points that did not appear to coincide
01:22:59 11 with events on the timeline to which changes had
01:23:09 12 been attributed or linked in purported causal
01:23:22 13 claims by various experts in the matter.

01:23:25 14 Q. When you used the word "trajectory"
01:23:28 15 in your previous response, trajectory of what?

01:23:30 16 A. Sales.

01:23:31 17 Q. Sales of Johnson & Johnson
01:23:32 18 products?

01:23:32 19 A. Yes. So volumes, in other words.

01:23:45 20 Q. Is there any other item among the
01:23:50 21 items you identified, and setting aside Cotromano
01:23:54 22 and the case we just discussed, in which you
01:24:01 23 offered an opinion in an expert report that you
01:24:04 24 believed to be responsive to my question as to
01:24:08 25 whether there was any occasion in which you

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01:24:10 1 endeavored to assess whether there was a link
01:24:13 2 between a news event and a reaction in volume and
01:24:16 3 you concluded there was no such link, based in
01:24:18 4 whole or in part, on your observation of abnormal
01:24:24 5 reactions in volume on days with no news-events?

01:24:27 6 MR. FIGEL: Objection.

01:24:27 7 A. Setting aside the character and
01:24:32 8 similar analyses with different details to the one
01:24:37 9 that I have just described, there are -- in the
01:24:47 10 JUUL matter, one or more JUUL matters,
01:24:51 11 JUUL-related matters, there is a similar -- I -- I
01:24:59 12 take it back.

01:25:00 13 The -- I suppose youth usage can be
01:25:05 14 described as volume. So it's not a price effect.
01:25:13 15 But there is a volume effect, and there are
01:25:15 16 disclosures along -- arranged along a timeline,
01:25:19 17 and there are marked changes in volume.

01:25:21 18 And there is a question of whether
01:25:22 19 the marked changes in volume are -- can be related
01:25:30 20 in a statistically reliable way to disclosures.

01:25:36 21 Now, again, as in the opioid
01:25:40 22 matter, there is a question in my mind about
01:25:42 23 whether the disclosure is just a disclosure, a
01:25:46 24 news event or, whether, as a news event, it is
01:25:54 25 describing some underlying real event that may be

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01:25:56 1 the driver of any consequence.

01:26:02 2 I suppose there is always a real
01:26:03 3 event that is described in news unless it's fake
01:26:06 4 news.

01:26:06 5 But the analysis that I have
01:26:10 6 performed of -- of youth usage in relation to
01:26:19 7 timeline markers are of that character where there
01:26:26 8 are marked statistical changes, statistically
01:26:31 9 large changes in youth usage that do not coincide
01:26:37 10 with the disclosed events that are held to be or
01:26:45 11 hypothesized to be possibly causal.

01:26:49 12 Q. And was the existence of those
01:26:51 13 marked statistical changes that you just described
01:26:55 14 influential on your opinion that you presented in
01:26:59 15 the JUUL matter?

01:27:00 16 A. Yes.

01:27:00 17 MR. FIGEL: Objection.

01:27:02 18 Sorry.

01:27:02 19 Q. In what way?

01:27:03 20 A. The fact that they were held to be,
01:27:09 21 by some opinions in the case, causally related but
01:27:16 22 were, in fact, not -- did not coincide in a
01:27:25 23 rationally recognizable way with the changes that
01:27:29 24 they are supposed to have caused was part of my
01:27:32 25 support for the opinion that the causation -- that

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01:27:40 1 certain causation claims had simply not been
01:27:43 2 established on a statistically reliable basis.

01:27:47 3 Q. I've asked a series of questions
01:27:55 4 relating to reactions in volume. I'll ask for
01:27:59 5 your patience. I'm going to ask the same question
01:28:02 6 with price to make sure we covered the whole
01:28:04 7 ground here.

01:28:04 8 In your professional career, was
01:28:06 9 there any occasion in which you endeavored to
01:28:08 10 assess whether there was a link between a news
01:28:10 11 event and a reaction in price and you concluded
01:28:13 12 there was no such link, based in whole or in part,
01:28:15 13 on your observation of abnormal reactions in price
01:28:20 14 on days with no-news events?

01:28:22 15 MR. FIGEL: Objection.

01:28:22 16 A. If I heard the preamble correctly,
01:28:24 17 you asked in my professional career, which goes
01:28:28 18 back to about 1982 at the University of Chicago.

01:28:36 19 I've already testified at some
01:28:40 20 length about the fact -- I hope understandable
01:28:45 21 fact -- that I simply cannot testify about the
01:28:50 22 content of event study related or event study
01:28:58 23 analogous work that I did 20 years ago, and
01:29:02 24 certainly 40 years ago is not any easier.

01:29:16 25 So I would have to say

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01:29:18 1 almost -- almost certainly yes, there have been
01:29:22 2 such occasions, but I cannot recall sitting --
01:29:31 3 that sitting here today. I can't identify a
01:29:34 4 specific instance for you today.

01:29:39 5 It is most likely that that
01:29:41 6 occurred while I was still doing academic
01:29:44 7 research.

01:29:48 8 Q. When was that?

01:29:49 9 A. That was a period that spanned
01:29:53 10 approximately 40 years ago to 30 years ago.

01:29:57 11 Q. Why is it most likely that it
01:30:03 12 occurred when you were doing your academic
01:30:05 13 research?

01:30:05 14 A. Because I was looking at many more
01:30:08 15 event study-type analyses then and at a much
01:30:12 16 greater variety of -- in the main, much more
01:30:14 17 interesting questions than the ones that arise in
01:30:17 18 narrow litigation assignments.

01:30:21 19 Q. In this case, you are offering
01:30:26 20 solely an expert rebuttal opinion. Is that right?

01:30:31 21 A. It is right to the extent that I am
01:30:34 22 responding in a focused way to the report of
01:30:43 23 Dr. [REDACTED] in this case. That said, if Dr. [REDACTED]
01:30:46 24 were, God forbid, to vanish off the face of the
01:30:50 25 earth and somebody else presented opinions that

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01:30:53 1 overlap with the [REDACTED] issues that I address, my
01:30:59 2 opinions would be pertinent, more broadly because
01:31:03 3 I address issues. I don't address the person,
01:31:08 4 Dr. -- Dr. [REDACTED].

01:31:11 5 Q. As it stands today, does your
01:31:13 6 rebuttal opinion pertain solely to opinions set
01:31:17 7 forth in Dr. [REDACTED] expert report?

01:31:20 8 A. Yes. I think that is a fair
01:31:21 9 characterization.

01:31:23 10 Q. Are all of the opinions --

01:31:24 11 A. It -- sorry. Can I just add?

01:31:26 12 Q. Please.

01:31:26 13 A. It refers to the -- to what
01:31:32 14 those -- what the Dr. [REDACTED] findings do and not --
01:31:37 15 and do not convey and imply about what I
01:31:46 16 understand are issues in this case. And in that
01:31:52 17 sense, my opinions go beyond Dr. [REDACTED], because
01:31:56 18 Dr. [REDACTED] is not very explicit on that point.

01:31:58 19 But it is certainly the case
01:32:00 20 that -- and I view my work as rebuttal to
01:32:03 21 Dr. [REDACTED]. It just happens that in discussing what
01:32:07 22 Dr. [REDACTED] conclusions mean and what their
01:32:11 23 significance is, I end up going a little bit
01:32:13 24 beyond what Dr. [REDACTED] himself says.

01:32:15 25 Q. Can you identify for me the

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01:32:16 1 occasions on which you go a little bit beyond what
01:32:19 2 Dr. [REDACTED] says?

01:32:20 3 A. I'm not sure I will get all of them
01:32:31 4 from memory, but I can give you an illustration.

01:32:33 5 Q. Please.

01:32:34 6 A. (Document review.)

01:32:53 7 I'm looking, for instance, at
01:32:58 8 paragraph 5 of my report. And I'm going to skip
01:33:02 9 the first part of -- it's a single-sentence
01:33:10 10 paragraph, which is remarkable in itself.

01:33:20 11 I will skip over the first half of
01:33:21 12 it and say that I was asked to address:

01:33:23 13 "Whether, based on my expertise,
01:33:26 14 his opinions support the contention that, in
01:33:28 15 economic substance, movements in XRP prices
01:33:32 16 solely or predominantly reflect responses to
01:33:36 17 disclosures about Ripple's actions."

01:33:42 18 Now, I don't know that I can -- it
01:33:43 19 may be that I can, but I'm not sure that I can
01:33:47 20 find in Dr. [REDACTED] report a claim or an opinion
01:33:57 21 that movements in XRP prices solely or
01:33:59 22 predominantly reflect responses to disclosures
01:34:01 23 about Ripple's actions.

01:34:03 24 So in that sense, my addressing
01:34:07 25 that question does go beyond what Dr. [REDACTED] seems

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01:34:13 1 to assert directly in his own conclusions and go
01:34:18 2 to exactly what I just explained as what do these
01:34:21 3 conclusions say or not about what an issue -- a
01:34:28 4 question that I understand to be important in this
01:34:30 5 case.

01:34:30 6 Q. Do you believe from your reading of
01:34:32 7 Dr. [REDACTED] report that he's contending:

01:34:35 8 "In economic substance, movements
01:34:36 9 in XRP prices solely or predominantly reflect
01:34:47 10 responses to disclosures about Ripple's
01:34:49 11 actions"?

01:34:50 12 A. I think he does not, to the best of
01:34:54 13 my recollection. Without actually paging through
01:34:56 14 it, I think -- I doubt that I can find a place
01:34:58 15 where Dr. [REDACTED] states a proposition that I would
01:35:01 16 say amounts to this.

01:35:03 17 But I would say that Dr. [REDACTED] is
01:35:05 18 careless about not alerting the reader of his
01:35:14 19 report to the rather extreme limitations of what
01:35:18 20 his findings really show.

01:35:20 21 And in that sense, he rather
01:35:28 22 invites a reader of his report to fill in the
01:35:34 23 missing piece that gets you to these words in
01:35:36 24 paragraph 5. And he does nothing to -- to -- he
01:35:41 25 doesn't put in any railing or fencing to keep the

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01:35:43 1 reader of his report away from drawing that
01:35:46 2 inference.

01:35:49 3 That's what I mean in paragraph 7,
01:35:51 4 what the words in paragraph 7 of my report.

01:35:53 5 Q. Which words are you referring to,
01:35:57 6 Dr. Marais?

01:35:57 7 A. Where I say, I quote -- in
01:35:59 8 paragraph 6, I quote him in his expansive
01:36:04 9 conclusion:

01:36:05 10 "Statistically significant evidence
01:36:07 11 XRP prices react to news about Ripple's
01:36:10 12 actions ... the results hold for nearly all
01:36:13 13 statistical models ... taken together, this
01:36:16 14 indicates" -- bottom line conclusion -- "XRP
01:36:18 15 prices react to the news of actions by Ripple
01:36:23 16 Labs."

01:36:24 17 Now, for somebody who has in mind
01:36:26 18 what I understand to be the question in this
01:36:28 19 case -- Do XRP purchasers purchase XRP looking for
01:36:34 20 value from Ripple Labs? -- that statement doesn't
01:36:39 21 contain any user warnings about the limitations of
01:36:46 22 Dr. [REDACTED] work. And that's why I say this
01:36:49 23 language -- your question to me was what language
01:36:52 24 am I referring to in my own paragraph. And the
01:36:54 25 language I'm -- I was referring to is where I say:

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01:36:57 1 "This language invites a reader of
01:37:00 2 the [REDACTED] report to conclude that Dr. [REDACTED] has
01:37:04 3 identified statistical evidence showing that
01:37:06 4 XRP price movements are driven largely -- and
01:37:09 5 causally" -- which he certainly has not
01:37:14 6 done -- "by actions taken by Ripple."

01:37:18 7 Q. So is it fair to say that your view
01:37:23 8 is not that Dr. [REDACTED] contends that, in economic
01:37:30 9 substance, movements in XRP prices solely or
01:37:34 10 predominantly reflect responses to disclosures
01:37:39 11 about Ripple actions, but that a reader could draw
01:37:43 12 that inference from reading his report?

01:37:45 13 MR. FIGEL: Objection.

01:37:45 14 A. I think that is so close to fair
01:37:48 15 that it's almost not possible to see the daylight
01:37:52 16 between it and fairness, but I do see some
01:37:58 17 daylight there.

01:37:58 18 I would not testify that Dr. [REDACTED]
01:38:02 19 does not test- -- contend that. I have testified
01:38:06 20 that he does not ex- -- I can't point to express
01:38:08 21 language in Dr. [REDACTED]. But Dr. [REDACTED] is a little
01:38:16 22 unclear in his restatements of his assignments.

01:38:20 23 The assignments can be read as
01:38:22 24 being fairly broad. And Dr. [REDACTED] conclusion is
01:38:26 25 so strongly positive on discovering what he says

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01:38:33 1 he was asked to look for, as quoted here, that
01:38:43 2 it's almost a contention. That's why I say there
01:38:47 3 is little daylight between what I actually am
01:38:49 4 testifying to and your characterization of it.

01:38:53 5 Of course, if Dr. [REDACTED] were here
01:38:55 6 and simply disavowed these opinions, I would say,
01:39:02 7 "Sorry, I stand corrected. You are not saying
01:39:05 8 anything causal and you are not saying that."

01:39:09 9 But since I have only his report to
01:39:10 10 work with, this is where I end up.

01:39:19 11 Q. Is it possible that XRP prices
01:39:22 12 could react to the news of actions by Ripple Labs
01:39:25 13 and also, at the same time, that XRP prices do not
01:39:31 14 solely or predominantly reflect responses to
01:39:33 15 disclosures about Ripple's actions?

01:39:36 16 MR. FIGEL: Objection.

01:39:47 17 A. I think that that is not only
01:39:49 18 possible, but as far as I can tell, that is -- I
01:39:56 19 can't say the -- I will disavow any causal
01:40:02 20 conclusion, because I'm not sure -- I don't see
01:40:04 21 any simple -- any sufficient basis for genuine
01:40:08 22 causal conclusions.

01:40:11 23 So I'll stick with "associate"
01:40:13 24 rather than "caused by." With that qualification,
01:40:20 25 I think what you've -- the possibility you've

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01:40:23 1 asked me about is the pos- -- is where we are.

01:40:25 2 Dr. [REDACTED] does document that
01:40:32 3 a -- what I will characterize as a sliver of the
01:40:36 4 large abnormal returns on XRP do coincide
01:40:46 5 with -- different from causation -- do coincide
01:40:50 6 with Ripple news events. Most of the large price
01:40:54 7 movements that he identifies do not coincide with
01:40:57 8 Ripple news events.

01:41:01 9 So the nature of the coincidence
01:41:03 10 that he finds is a statistically significant
01:41:05 11 association. It is an association with a sliver
01:41:12 12 of the large price movements in XRP, and I
01:41:21 13 would -- that -- that's my basis for saying yes,
01:41:24 14 with my caveat. I do -- I think that it's not
01:41:30 15 only possible, I think that's what the evidence
01:41:32 16 that I'm aware of shows.

01:41:33 17 Q. Do you think that the evidence that
01:41:37 18 you just described that Dr. [REDACTED] identified in his
01:41:41 19 report is sufficient to support the sentence:
01:41:46 20 "This evidence indicates that XRP prices react to
01:41:52 21 the news of actions by Ripple Labs"?

01:41:54 22 MR. FIGEL: Objection.

01:41:54 23 A. Properly understood, the problem --
01:42:01 24 and I'm happy -- I realize I've been giving rather
01:42:05 25 long answers. I'll stop there.

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01:42:07 1 Properly -- properly understood,
01:42:09 2 yes, and I'm -- if you would like, I would be
01:42:12 3 happy to explain what I mean by that.

01:42:14 4 Q. I think -- let's return to this
01:42:17 5 line of questioning.

01:42:26 6 Other than Dr. [REDACTED] report, have
01:42:28 7 you read any other expert reports in this case?

01:42:34 8 A. I have -- "read" is perhaps too
01:42:39 9 strong. I have reviewed -- I've reviewed one
01:42:40 10 report, one other report.

01:42:46 11 Q. Which one?

01:42:47 12 A. The report of Dr. or Professor
01:42:52 13 Allen Ferrell.

01:42:52 14 Q. You characterized your review as
01:42:54 15 "'read' is too strong." Why is that?

01:43:03 16 A. I paged through it, paused on the
01:43:06 17 most rivetingly interesting pages, which are the
01:43:09 18 ones that have statistics on them, long enough to
01:43:14 19 understand what is being done there and read
01:43:28 20 with -- and perused, reviewed with very little
01:43:31 21 attention the substantial discussion in that
01:43:33 22 report of things that I think, if I remember
01:43:40 23 right, are called the Howey factors. The Howey
01:43:48 24 factor, H-o-w-i-e, I think. Or is it e-y? I'm
01:43:51 25 not sure.

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01:43:55 1 MR. FIGEL: Mr. Sylvester and I
01:43:57 2 both know but we're not testifying. Can I
01:44:02 3 spare the court reporter?

01:44:03 4 MR. SYLVESTER: Go ahead.

01:44:04 5 MR. FIGEL: It's e-y.

01:44:08 6 Q. Okay. Other than Dr. Ferrell's
01:44:11 7 report, have you read any other expert reports in
01:44:15 8 this case?

01:44:15 9 A. Other than Dr. Ferrell's report and
01:44:20 10 Dr. [REDACTED] report?

01:44:21 11 Q. I stand corrected. Other than
01:44:23 12 those two.

01:44:23 13 A. No, I've read no other reports.

01:44:25 14 Q. Okay. Are you offering any
01:44:27 15 opinions in this case about the contents of any
01:44:29 16 expert reports other than Dr. [REDACTED] expert report?

01:44:34 17 A. Not as I sit here today. I've
01:44:36 18 already indicated that if asked -- I've already
01:44:39 19 testified that I have no pending projects or
01:44:43 20 requests. I've also testified that if asked, I
01:44:46 21 would consider a request within reason.

01:44:53 22 Q. Do you know Dr. [REDACTED]?

01:45:01 23 A. I thought about that when I read
01:45:04 24 that he was at the [REDACTED]. But we
01:45:06 25 did not overlap, I believe, at the [REDACTED]

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01:45:10 1 [REDACTED].

01:45:11 2 So the -- so I didn't remember him,
01:45:15 3 and then I looked at his CV, and I still did not
01:45:19 4 remember him.

01:45:19 5 Q. Other than any information that you
01:45:21 6 obtained from Dr. [REDACTED] CV, do you know anything
01:45:25 7 about him?

01:45:26 8 A. No.

01:45:26 9 Q. Did you review the portions of
01:45:31 10 Dr. [REDACTED] report that sets forth his
01:45:34 11 qualifications?

01:45:38 12 A. Yes. So I suppose I should have
01:45:41 13 said yes, do I know anything else? Anything that
01:45:44 14 it says in his report about him that is not also
01:45:47 15 in his CV, I learned from that source.

01:45:50 16 Q. Is it your view that Dr. [REDACTED] is
01:45:53 17 qualified to offer the opinions he offered in his
01:45:57 18 expert report?

01:45:57 19 MR. FIGEL: Objection.

01:45:58 20 A. Based on his description of his
01:46:01 21 background and what his CV says about him, I have
01:46:12 22 no basis to question Dr. [REDACTED] technical
01:46:15 23 qualifications.

01:46:15 24 Q. Do you know Dr. Ferrell?

01:46:18 25 A. No.

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01:46:18 1 Q. Do you know anything about

01:46:21 2 Dr. Ferrell?

01:46:26 3 A. Yes.

01:46:26 4 Q. What do you know?

01:46:27 5 A. The things that I learned from his

01:46:31 6 CV and from his description of his qualifications

01:46:36 7 in his -- in the report that I looked at briefly.

01:46:40 8 Q. Are you aware that defendants

01:46:45 9 submitted an expert report by Daniel Fischel?

01:46:50 10 A. Yes, I am.

01:46:50 11 Q. Did you read his report?

01:46:51 12 A. No.

01:46:51 13 Q. Did you communicate with him about

01:46:53 14 his report?

01:46:54 15 A. No.

01:46:55 16 Q. Did you communicate with him about

01:46:57 17 your report?

01:46:57 18 A. No.

01:46:57 19 Q. Have you communicated with

01:47:02 20 Mr. Fischel at all about the topic of this case?

01:47:05 21 A. No.

01:47:06 22 Q. You do know Mr. Fischel though?

01:47:13 23 A. Yes.

01:47:13 24 Q. You work together?

01:47:15 25 A. Yes.

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01:47:15 1 Q. Do you work closely with him?

01:47:20 2 A. That would overstate it. I've
01:47:23 3 known Mr. Fischel for much longer than I've been
01:47:27 4 at Compass Lexecon. So I say that to explain that
01:47:31 5 I know Mr. Fischel, but I don't work closely with
01:47:37 6 him.

01:47:37 7 Q. Outside of Dr. [REDACTED] report, has
01:47:42 8 defense counsel provided you with any other event
01:47:46 9 study regarding XRP's price?

01:47:49 10 MR. FIGEL: Why don't you start by
01:47:51 11 answering yes or no.

01:47:52 12 A. No.

01:47:52 13 Q. Outside of Dr. [REDACTED] report and the
01:47:55 14 Joo paper that we discussed earlier, are you aware
01:47:58 15 of any other event study conducted regarding XRP's
01:48:04 16 price?

01:48:05 17 A. I have no specific knowledge of any
01:48:07 18 other event study.

01:48:16 19 Q. Okay. Turning to paragraph 4 of
01:48:17 20 your report. Fair to say that paragraph 4, among
01:48:33 21 other things, summarizes certain of Dr. [REDACTED]
01:48:38 22 conclusions?

01:48:39 23 A. (Document review.)

01:48:55 24 Yes.

01:48:55 25 Q. In addition to the conclusions that

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01:48:58 1 you summarize in your paragraph 4, Dr. [REDACTED] also
01:49:01 2 reached certain conclusions regarding the
01:49:03 3 relationship between XRP returns and the returns
01:49:05 4 of other digital assets. Correct?

01:49:09 5 A. Yes.

01:49:09 6 Q. Are you offering any opinion in
01:49:13 7 this case regarding Dr. [REDACTED] conclusions
01:49:15 8 regarding the link between XRP prices and the
01:49:17 9 prices of other digital assets?

01:49:20 10 A. I am not unless there is some way
01:49:26 11 in which that topic is implicated in the topics
01:49:30 12 that I do address that I'm not recognizing at the
01:49:33 13 moment.

01:49:39 14 Q. I think we covered this earlier,
01:49:40 15 but for the record, the concluding part of
01:49:43 16 paragraph 5, the -- that, as I understand
01:49:47 17 it -- let me -- strike that.

01:49:48 18 Paragraph 5 describes your
01:49:49 19 assignment. Is that right?

01:49:50 20 A. Yes.

01:49:57 21 Q. Okay. And the concluding part of
01:49:58 22 paragraph 5 in which -- which ends:

01:50:00 23 "His opinions support the
01:50:01 24 contention that, in economic substance,
01:50:03 25 movements in XRP prices solely or

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01:50:06 1 predominantly reflect responses to
01:50:09 2 disclosures about Ripple's actions."

01:50:11 3 That assignment was given to you by
01:50:13 4 counsel. Is that right?

01:50:19 5 A. As I say in that paragraph, the
01:50:21 6 whole paragraph is my assignment from counsel. It
01:50:25 7 begins: "Counsel for Ripple has asked me to
01:50:32 8 assess."

01:50:33 9 Q. Does Dr. [REDACTED] use the phrase
01:50:36 10 "economic substance" anywhere in his report?

01:50:51 11 A. I would have to use Acrobat tools
01:50:55 12 like the search function to tell that. I don't
01:50:58 13 have a verbatim recall.

01:51:00 14 Q. Do you recall whether Dr. [REDACTED] used
01:51:02 15 the words "solely or predominantly" in his report?

01:51:13 16 A. Again, I can't be certain of that,
01:51:17 17 but I have no reason to think that he did. I
01:51:21 18 believe that is the
01:51:22 19 characterize- -- characterization of my
01:51:23 20 assignment, not a characterization of -- not a
01:51:26 21 quote from Dr. [REDACTED].

01:51:28 22 And you did ask me earlier, as you
01:51:31 23 know, and I did testify earlier about this entire
01:51:42 24 half paragraph, and I did indicate at some length
01:51:44 25 its relation, in my mind, to what Dr. [REDACTED] does

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01:51:47 1 conclude expressly.

01:51:53 2 Q. Taking a look at paragraph 30 of
01:51:56 3 your report.

01:52:05 4 A. I'm there.

01:52:06 5 Q. Do you summarize your opinions in
01:52:10 6 paragraph 30, starting with this phrase "in sum"?

01:52:15 7 A. Yes.

01:52:22 8 Q. Okay. You first write:

01:52:23 9 "It would be wrong to interpret
01:52:25 10 Dr. [REDACTED] event study as establishing that
01:52:28 11 XRP price movements are essentially a
01:52:30 12 function of Ripple's actions."

01:52:34 13 Do you see that?

01:52:34 14 A. Yes.

01:52:34 15 Q. Okay. Are you opining in this case
01:52:36 16 as to whether or not XRP price movements are
01:52:39 17 essentially a function of Ripple's actions?

01:52:42 18 A. I am opining that there is nothing
01:52:48 19 in Dr. [REDACTED] work that supports that conclusion
01:52:50 20 and, rather, that Dr. [REDACTED] work seems to refute
01:52:54 21 rather than support that conclusion.

01:53:00 22 Q. Have you performed any analysis to
01:53:02 23 determine whether or not XRP price movements are
01:53:04 24 essentially a function of Ripple's actions?

01:53:07 25 A. I have performed such an analysis

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01:53:09 1 only in my review and assessment of Dr. [REDACTED] work
01:53:14 2 in this case. I have not undertaken that
01:53:21 3 assignment from scratch.

01:53:28 4 Q. You next write:

01:53:30 5 "Instead, the [REDACTED] event study
01:53:36 6 cannot prove a causal relationship between
01:53:38 7 Ripple's actions and XRP price movements."

01:53:41 8 Do you see that?

01:53:41 9 A. Yes.

01:53:42 10 Q. Are you -- setting aside your
01:53:45 11 critique of Dr. [REDACTED] report, are you offering any
01:53:49 12 other opinions in this case as to whether or not
01:53:51 13 there is a causal relationship between Ripple's
01:53:55 14 actions and XRP price movements?

01:53:57 15 MR. FIGEL: Objection.

01:53:57 16 A. So to be clear, we're setting aside
01:53:59 17 entirely Dr. [REDACTED] work and my response to
01:54:01 18 Dr. [REDACTED] work. Outside of my response to
01:54:08 19 Dr. [REDACTED] work, I am not offering any other
01:54:11 20 opinion independently of my review of Dr. [REDACTED] on
01:54:18 21 a causal relation of this kind.

01:54:23 22 Q. Other than your review of Dr. [REDACTED]
01:54:24 23 work, have you performed any analysis to determine
01:54:27 24 whether or not there's a causal relationship
01:54:30 25 between Ripple's actions and XRP price movements?

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01:54:33 1 MR. FIGEL: Objection.

01:54:34 2 A. I have not. Doing such a thing was
01:54:37 3 not part -- has never been part of my assignment,
01:54:40 4 as I understood it, in this case.

01:54:42 5 Q. In the next sentence, Dr. Marais,
01:54:45 6 do you see the phrase "and, even if it could do
01:54:49 7 so"?

01:54:49 8 A. Yes.

01:54:53 9 Q. Does that phrase "even if it could
01:54:55 10 do so" reference, essentially, even if the [REDACTED]
01:55:01 11 event study could prove a causal relationship
01:55:02 12 between Ripple's actions and XRP price movements?

01:55:06 13 A. Yes.

01:55:07 14 Q. Okay. The sentence continues:

01:55:13 15 "The [REDACTED] event study documents at
01:55:20 16 best that any dependence of XRP price
01:55:22 17 movements on Ripple-related news accounts for
01:55:25 18 no more than a modest, far-from-preponderant
01:55:28 19 portion of XRP's unusual price movements
01:55:30 20 since 2014."

01:55:31 21 Do you see that?

01:55:31 22 A. Yes.

01:55:32 23 Q. When you say "XRP's unusual price
01:55:34 24 movements since 2014," what is it that you are
01:55:36 25 referring to?

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01:55:36 1 A. "Unusual" is written with a capital
01:55:39 2 U, and that is because it's a defined term that I
01:55:43 3 define early on in my report.

01:55:46 4 I'm happy to recount the -- that
01:55:48 5 definition that I give earlier. But if you are
01:55:52 6 going to be taking me through that portion of my
01:55:55 7 report anyway, we might as well just go there and
01:55:58 8 not do it twice.

01:56:04 9 Q. Sure. Why not. Do you want to
01:56:07 10 point me to the paragraph that you're identifying,
01:56:11 11 Dr. Marais?

01:56:11 12 A. Yes. Page 6, Footnote 13, which
01:56:35 13 ties to the first full sentence on that page.

01:56:45 14 Q. In Footnote 13, you define your use
01:56:47 15 of the term "unusual"?

01:56:49 16 A. Yes. Actually, not only
01:56:52 17 Footnote 13, but paragraph 13 that -- near the
01:56:55 18 foot of the previous page.

01:56:57 19 Q. What is your definition for
01:57:00 20 "unusual" for the purposes of your report?

01:57:02 21 A. Well, I use, as I define the term
01:57:04 22 here, having noted that Dr. [REDACTED] has several
01:57:12 23 different ways of identifying what he calls
01:57:14 24 significantly positive trading days or event days,
01:57:19 25 any one of those, whichever one happens to be

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01:57:22 1 pertinent at any given point in the discussion is
01:57:25 2 what I call capital U "Unusual" trading days.

01:57:32 3 Q. Are unusual trading days the days
01:57:36 4 on which Dr. [REDACTED] observed abnormal returns in
01:57:42 5 XRP?

01:57:42 6 MR. FIGEL: Objection.

01:57:49 7 A. No.

01:57:49 8 Q. Why not?

01:57:52 9 MR. FIGEL: Objection.

01:57:53 10 A. Because there is an abnormal return
01:58:03 11 in XRP every -- on every single trading day. In
01:58:08 12 fact, there are abnormal returns of various
01:58:11 13 flavors on every single trading day, and they are
01:58:16 14 not all unusual returns, that's why not.

01:58:19 15 Q. And can you, once again, just
01:58:27 16 define for me what an unusual return is for
01:58:29 17 purposes of your report?

01:58:30 18 A. Yes, it is a -- it is an abnormal
01:58:35 19 return of the kind that Dr. [REDACTED] labels as
01:58:42 20 significantly positive by either a parametric or a
01:58:49 21 nonparametric procedure applied in either a
01:58:55 22 two-sided or a one-sided way and with the, sort
01:59:06 23 of, small, local data mining exercise that he
01:59:09 24 performs at each trading day.

01:59:14 25 Q. Are unusual days days in which

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01:59:16 1 there is a statistically significant abnormal XRP
01:59:20 2 return?

01:59:20 3 MR. FIGEL: Objection.

01:59:24 4 A. No, that is -- that's not -- that's
01:59:27 5 moving in the right direction but it's not --
01:59:35 6 doesn't quite get there yet.

01:59:37 7 Q. Is it fair to say that you take
01:59:43 8 issue with Dr. [REDACTED] calling specific trading days,
01:59:47 9 quote, "significantly positive"?

01:59:56 10 A. I -- "taking issue" is stronger.
01:59:57 11 This is just a small difference of opinion in what
02:00:07 12 is a fair -- a reasonably informative term to use.
02:00:12 13 I don't particularly take issue with him.

02:00:14 14 But statistically significantly
02:00:20 15 positive has a meaning from a textbook. And what
02:00:26 16 Dr. [REDACTED] actually does doesn't quite conform to
02:00:30 17 any standard textbook definition. That's why I
02:00:33 18 introduced the term "unusual" rather than using
02:00:35 19 a -- rather than misusing a term of art.

02:00:40 20 Q. Is there any component to your
02:00:42 21 definition of "unusual" that involves statistical
02:00:47 22 significance?

02:00:49 23 A. Yes.

02:00:49 24 Q. What is that component?

02:00:50 25 A. It is the -- what I call the small

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02:00:53 1 local data mining exercise of picking a target
02:00:58 2 day, picking one of the four approaches -- the
02:01:03 3 parametric, nonparametric, one-sided, two-sided,
02:01:10 4 whatever, pick the approach. Then that approach
02:01:13 5 gives you a means of determining textbook-type
02:01:20 6 statistical significance.

02:01:22 7 But what you then do is you look
02:01:26 8 for the target -- the single target day with which
02:01:31 9 you began alone, and separately for the single
02:01:35 10 target day as well as the day following it, and
02:01:39 11 separately again for the target day, the day
02:01:42 12 following it, and day plus two following it.

02:01:50 13 You apply the more or less standard
02:01:52 14 textbook notion of statistical significance to all
02:01:58 15 three of those, and you pick the best of three, as
02:02:03 16 it were, if -- meaning, if any of them crosses the
02:02:09 17 threshold for statistical significance, now your
02:02:14 18 day -- your single target day with which you began
02:02:17 19 is, at least, a candidate for being labeled what
02:02:20 20 Dr. [REDACTED] calls significantly positive.

02:02:25 21 But now there's more. You now do
02:02:27 22 the same thing in the opposite direction. You
02:02:29 23 look at the target day, the target day plus the
02:02:31 24 next day, and finally, the target day plus the
02:02:34 25 next two days, and you look for a significantly

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02:02:42 1 negative indication by the usual textbook version
02:02:46 2 of what that means.

02:02:48 3 In each of those three cases, you
02:02:51 4 look for the most significant of the three and
02:02:53 5 check to see that that most significantly negative
02:02:59 6 outcome does not actually reach significance.

02:03:05 7 And only if you have done all of
02:03:09 8 those steps do you finally -- and reach the
02:03:19 9 judgments, the conclusions that I have outlined
02:03:21 10 here -- only then do you call the day, label that
02:03:24 11 trading day with which you began, as significantly
02:03:29 12 positive.

02:03:31 13 So there are many pieces involved
02:03:34 14 there, many more than in a standard textbook
02:03:40 15 definition or procedure for determining
02:03:44 16 statistical significance.

02:03:46 17 That whole -- that's what I call
02:03:47 18 the small local data mining exercise. And if you
02:03:51 19 pass -- if a -- the day with which you began
02:03:55 20 passes that threshold, that's what I call
02:03:59 21 "unusual," an unusual day, as a defined term.

02:04:03 22 Q. Let's return to your paragraph 7.

02:04:30 23 Before I ask a question on 7, do
02:04:31 24 you agree that Dr. [REDACTED] procedure flags days with
02:04:34 25 large positive price reactions?

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02:04:36 1 MR. FIGEL: Objection.

02:04:36 2 A. Broadly, yes. It's a screen
02:04:45 3 that -- of course, it has all of the texture in it
02:04:49 4 that -- or all of the details that I just
02:04:51 5 testified about.

02:04:52 6 So just saying "large positive,"
02:04:54 7 well, there will be some positive -- there may be
02:04:57 8 some large positive price react- -- price
02:05:03 9 movements, not reactions, but price movements,
02:05:07 10 that it may be that there are some that somebody
02:05:10 11 would think is large, but that don't get flagged
02:05:15 12 by this procedure.

02:05:15 13 But it's broadly a fair description
02:05:17 14 that it -- it sifts out larger from smaller upward
02:05:22 15 price movements, in the sense I testified about.

02:05:36 16 Q. We discussed briefly earlier the
02:05:39 17 start of paragraph 7 where you write that
02:05:45 18 Dr. [REDACTED]:

02:05:46 19 "Language invites a reader of the
02:05:50 20 [REDACTED] report to conclude that Dr. [REDACTED] has
02:05:53 21 identified statistical evidence showing that
02:05:55 22 XRP price movements are driven largely and
02:05:58 23 causally by actions taken by Ripple."

02:06:01 24 Do you remember that conversation
02:06:02 25 earlier?

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02:06:02 1 A. I can bring it back to mind.

02:06:04 2 Q. Other than the portion of Dr. [REDACTED]
02:06:06 3 report that you quote in paragraph 6 of your
02:06:13 4 report, is there other language in Dr. [REDACTED]
02:06:16 5 report that extends the invitation you describe
02:06:20 6 here?

02:06:20 7 MR. FIGEL: Objection.

02:06:43 8 A. There may be. I have not committed
02:06:46 9 Dr. [REDACTED] report to memory. If you want a more
02:06:55 10 definite answer to that, I would have to have you
02:06:58 11 provide me a copy of Dr. [REDACTED] report.

02:07:04 12 I could -- I could answer the
02:07:06 13 question fairly quickly with his report in hand
02:07:10 14 because I know where to look if -- for any
02:07:13 15 additional language of that kind, if there is any.

02:07:19 16 Q. Let's return to that a bit later.

02:07:22 17 Are you offering any opinion in
02:07:24 18 this case as to whether or not XRP prices are
02:07:26 19 driven largely by Ripple's actions?

02:07:32 20 A. I am of -- as to -- yes, I am
02:07:36 21 offering the opinion that nothing in Dr. [REDACTED]
02:07:39 22 work establishes that proposition and that
02:07:48 23 Dr. [REDACTED] work, rather than support that
02:07:50 24 proposition, tends, instead, to refute it.

02:07:59 25 Q. And what you just described, is

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02:08:02 1 that the entirety of any opinion you're offering
02:08:07 2 with respect to whether XRP prices are driven
02:08:09 3 largely by Ripple's actions?

02:08:11 4 A. I hesitate to say yes because I say
02:08:16 5 a lot in my report, all of which goes to that
02:08:19 6 proposition. But -- so to say that that's the
02:08:22 7 entirety of what I have to say about that subject
02:08:25 8 is -- would not be accurate.

02:08:31 9 But I think, as a summary statement
02:08:33 10 of what I conclude from it all, I think it's fair.

02:08:40 11 Q. Returning back to paragraph 7, you
02:08:46 12 write in your second sentence:

02:08:50 13 "As I explained below, Dr. [REDACTED]
02:08:55 14 event study is not designed to investigate
02:08:57 15 this proposition and does not, in fact,
02:08:59 16 support such a conclusion."

02:09:01 17 Do you see that?

02:09:01 18 A. Yes.

02:09:01 19 Q. Is the "this proposition" in that
02:09:03 20 sentence that XRP price movements are driven
02:09:08 21 largely and causally by actions taken by Ripple?

02:09:10 22 A. Yes.

02:09:10 23 Q. Do you believe that Dr. [REDACTED]
02:09:12 24 assignment was to investigate whether XRP price
02:09:15 25 movements were driven largely and causally by

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02:09:18 1 actions taken by Ripple?

02:09:19 2 A. I can't rule it out, but it's not
02:09:30 3 clearly -- it's not clearly enough stated for me
02:09:31 4 to rule it in either. Specifically, Dr. [REDACTED] --
02:09:40 5 Dr. [REDACTED] provides more than one statement of what
02:09:43 6 he was asked to do.

02:09:45 7 And one of them begins with, the
02:09:48 8 SEC asked him to perform statistical analyses.
02:09:53 9 Oh, good, well, now we know what it's about. So
02:09:56 10 that doesn't help us very much.

02:09:58 11 And then it goes on to say,
02:10:05 12 concerning the relationship, as I -- I'm
02:10:09 13 paraphrasing at this point, I would have to go
02:10:13 14 back to Dr. [REDACTED] report to get the wording
02:10:16 15 right -- the formulation of concern -- statistical
02:10:21 16 analyses concerning the relationship is broad
02:10:24 17 enough to include this proposition or not.

02:10:33 18 So I -- I will say this: Dr. [REDACTED]
02:10:41 19 does not expressly say that this proposition, or
02:10:47 20 words very like it, captures his assignment. But
02:10:50 21 I can't -- I'm left, after reading the [REDACTED]
02:10:54 22 report, not entirely clear on where the bright
02:10:57 23 lines were. And given the apparent breadth of his
02:11:00 24 conclusions, it seems like he may think that he
02:11:04 25 was asked to opine on causation, for example.

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02:11:09 1 Q. And that -- strike that.

02:11:10 2 Is your basis for believing that
02:11:12 3 there's some possibility that Dr. [REDACTED] assignment
02:11:17 4 included investigating whether XRP price movements
02:11:22 5 are driven largely and causally by actions taken
02:11:27 6 by Ripple the breadth of Dr. [REDACTED] conclusions?

02:11:31 7 MR. FIGEL: Objection.

02:11:31 8 A. It's not a basis for believing this
02:11:37 9 to be the case. It's just a basis for being
02:11:40 10 unable to rule this out.

02:11:46 11 Again, if Dr. [REDACTED] were here and
02:11:51 12 were willing to stipulate that he's not trying to
02:11:52 13 say anything about causation and -- or about
02:11:56 14 substantial causation of XRP price movements,
02:12:00 15 if -- which I can't rule out, he may -- maybe he
02:12:03 16 would say that, and in that case, presumably, we
02:12:05 17 would be done.

02:12:06 18 Q. So is it fair to say that sitting
02:12:08 19 here today, you don't believe one way or the other
02:12:09 20 that Dr. [REDACTED] assignment was to investigate
02:12:12 21 whether XRP price movements are driven largely and
02:12:15 22 causally by actions taken by Ripple?

02:12:19 23 A. I don't --

02:12:19 24 MR. FIGEL: Objection.

02:12:20 25 THE WITNESS: I'm sorry.

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02:12:21 1 A. I don't have an opinion or belief
02:12:24 2 about that one way or another, other than that
02:12:27 3 Dr. [REDACTED] does not entirely rule it out either in
02:12:31 4 his statement of his assignment or in his -- in
02:12:35 5 the manner in which he states his conclusions.

02:12:36 6 I don't need to have an opinion
02:12:39 7 about that to reach my opinion, which is simply
02:12:42 8 that his work does not support that conclusion.

02:12:45 9 Q. You don't need to understand the
02:12:47 10 scope of his assignment to reach your opinion?

02:12:50 11 MR. FIGEL: Objection.

02:12:53 12 A. I don't need to resolve whether
02:12:55 13 this language is or is not, in his mind, part of
02:13:00 14 his assignment to be able to say that regard- --
02:13:08 15 that either way, the work that he performed and
02:13:11 16 presents in his report does not support this
02:13:15 17 proposition.

02:13:17 18 That opinion stands if Dr. -- the
02:13:23 19 hypothetical Dr. [REDACTED] I've referred to a time or
02:13:25 20 two, the [REDACTED] avatar came into the room and said,
02:13:33 21 "But that's not what I was trying to prove," then
02:13:36 22 I would say in response, "Well, great. Then we
02:13:43 23 agree that that's not even what you were trying
02:13:43 24 to, but you certainly didn't prove it."

02:13:45 25 And if Dr. [REDACTED] avatar came in and

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02:13:49 1 said that he was trying to prove it, I would say
02:13:51 2 the same, "Your work does not prove it."

02:13:54 3 That's why -- that is why it
02:13:55 4 doesn't matter, to my opinion, ultimately, what a
02:14:03 5 completely clear statement of his assignment was.

02:14:28 6 THE WITNESS: I'm noticing that
02:14:29 7 we've been going for about an hour and a
02:14:31 8 quarter --

02:14:31 9 MR. SYLVESTER: Would you like the
02:14:33 10 take a break?

02:14:33 11 THE WITNESS: Yes. It doesn't have
02:14:33 12 to be at this moment.

02:14:33 13 MR. SYLVESTER: Now's great. Let's
02:14:33 14 take a break.

02:14:35 15 THE WITNESS: Thank you,
02:14:36 16 Mr. -- you're Mr. Sylvester?

02:14:37 17 MR. SYLVESTER: I am.

02:14:37 18 THE WITNESS: Mr. Sylvester, thank
02:14:37 19 you.

02:14:37 20 MR. SYLVESTER: Sure.

02:14:37 21 THE VIDEOGRAPHER: The time is
02:14:37 22 2:13 p.m. This concludes Media 3. Off the
02:14:37 23 record.

02:37:11 24 (Recess taken from 2:13 p.m. to
02:37:11 25 2:36 p.m.)

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02:37:11 1 THE VIDEOGRAPHER: The time now is
02:37:11 2 2:36 p.m. This begins Media 4. On the
02:37:11 3 record.

02:37:11 4 BY MR. SYLVESTER:

02:37:20 5 Q. Dr. Marais, turning back to
02:37:21 6 paragraph 5 of your report.

02:37:30 7 A. I am there.

02:37:30 8 Q. Okay. Thank you. I believe that
02:37:31 9 you testified earlier that the question of whether
02:37:34 10 movements in XRP prices solely or predominantly
02:37:38 11 reflect responses to disclosures about Ripple's
02:37:42 12 actions was a central issue in this case. Is that
02:37:47 13 right?

02:37:51 14 A. I qual- -- as qualified by my
02:37:54 15 saying "I understand."

02:37:55 16 Q. What is the basis for your
02:37:56 17 understanding?

02:37:58 18 MR. FIGEL: You can answer it but
02:37:59 19 don't reveal communications with counsel.

02:38:11 20 A. The basis of my understanding is my
02:38:16 21 nonexpert paraphrase of what I understand the
02:38:27 22 expressions "investors in" or "purchasers of XRP
02:38:35 23 look to Ripple to create value."

02:38:41 24 Now, even though that may not be a
02:38:45 25 direct quote from anybody, the "create value"

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02:38:49 1 idea, that phrase, I think, comes straight from
02:38:53 2 Dr. [REDACTED] report. And I understand as a
02:38:59 3 layperson -- and, again, I need to be completely
02:39:02 4 clear, I'm confident that there is shelves full of
02:39:10 5 case law and legal understanding of this point,
02:39:13 6 and I'm not purporting to summarize any of that.
02:39:17 7 I'm just describing my layperson's understanding.

02:39:20 8 But looking to Ripple for creating
02:39:23 9 value as an investor in XRP, to me, does not
02:39:26 10 convey very occasionally looking to Ripple for a
02:39:31 11 sliver of the value creation or the sliver of the
02:39:35 12 value that might be created by my position in XRP.

02:39:43 13 But it strongly suggests to me
02:39:45 14 the -- - what I par- -- what I paraphrase in my
02:39:52 15 own statement that I gave you about what I -- my
02:39:55 16 understanding that that is a central issue in the
02:39:59 17 case.

02:39:59 18 So I do recall from the first
02:40:02 19 amended complaint in this case repeated references
02:40:04 20 by the SEC itself to -- to the economic substance
02:40:11 21 in -- and the actual phrase "in economic" -- "in
02:40:15 22 economic reality" I think actually is the phrase,
02:40:19 23 "economic reality dictates" or "in economic
02:40:22 24 reality."

02:40:23 25 Now, putting together, as an

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02:40:25 1 educated layperson, the idea of economic -- in
02:40:30 2 economic reality investors in XRP look to Ripple
02:40:39 3 for value creation, without any qualification that
02:40:42 4 says for some infinitesimal portion of that value
02:40:49 5 creation or some sliver, that, to me, suggests
02:40:57 6 this, what I've characterized here as the
02:41:00 7 contention that in economic substance, read
02:41:07 8 economic reality, movements in XRP prices solely,
02:41:08 9 or, if solely is too strong, predominantly reflect
02:41:16 10 responses to disclosures about Ripple's actions.

02:41:19 11 So I -- that was a longer answer
02:41:24 12 than I realized I was embarking on, but the -- you
02:41:34 13 were asking for my basis, and I did describe my
02:41:36 14 basis.

02:41:36 15 Q. Okay. Let's move on to paragraph
02:41:38 16 17 of your report, please.

02:41:42 17 A. That suggests to me, at this rate,
02:41:48 18 we'll be done in ten minutes.

02:41:56 19 Q. Why would we want to cut our time
02:41:59 20 short, Dr. Marais?

02:42:00 21 So paragraph 17, among other
02:42:03 22 things, contains your Table 1. Is that right?

02:42:05 23 A. Yes.

02:42:06 24 Q. And as I understand your Table 1,
02:42:09 25 it displays, among other information, tallies of

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02:42:13 1 numbers of days related to Dr. [REDACTED] Model 5, key
02:42:20 2 milestone news events model. Is that correct?

02:42:22 3 A. Yes. But for the statement to be
02:42:29 4 entirely correct, you also have to include
02:42:33 5 one -- you also have to include one-sided
02:42:34 6 parametric approach.

02:42:35 7 Q. Okay. Thank you. So looking at
02:42:37 8 the table, the top row is labeled -- or rather, I
02:42:43 9 should say the columns are labeled "Daily XRP
02:42:48 10 Return."

02:42:49 11 Do you see that?

02:42:49 12 A. Yes.

02:42:49 13 Q. And the Daily XRP Return columns
02:42:52 14 are split into "unusual" and "regular."

02:42:55 15 Do you see that?

02:42:56 16 A. Yes.

02:42:56 17 Q. And "unusual" there, is that the
02:42:58 18 same meaning of unusual that you explained to us
02:43:00 19 earlier today?

02:43:00 20 A. Yes.

02:43:01 21 Q. Okay.

02:43:01 22 A. Throughout my report, there's only
02:43:06 23 one meaning.

02:43:07 24 Q. And "regular" essentially means not
02:43:09 25 unusual. Is that right?

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02:43:09 1 A. That's exactly correct.

02:43:11 2 Q. Okay. And on the left side of the
02:43:13 3 table, addressing the rows, there's "News Event?"
02:43:17 4 question mark.

02:43:17 5 Do you see that?

02:43:19 6 A. Yes.

02:43:20 7 Q. And for "News Event?" question
02:43:23 8 mark, there are two values, "Yes" and "No."

02:43:26 9 Do you see that?

02:43:26 10 A. Yes.

02:43:26 11 Q. Does "Yes" indicate those days on
02:43:29 12 which Dr. [REDACTED] identified a Ripple key milestone
02:43:33 13 news event?

02:43:33 14 A. Yes.

02:43:34 15 Q. And "No" indicates any of the days
02:43:37 16 within this period in which Dr. [REDACTED] did not
02:43:40 17 identify a key milestone news event?

02:43:43 18 A. Yes.

02:43:43 19 Q. Okay. And the total number of days
02:43:45 20 in the entire Model 5, using a one-sided
02:43:52 21 parametric approach, is 2,007?

02:43:57 22 A. Yes.

02:43:59 23 Q. Okay. And -- go ahead.

02:43:59 24 A. Actually 2,008 but ...

02:44:05 25 Q. Do you want to elaborate on why --

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02:44:08 1 the difference between 2,007 and 2,008?

02:44:09 2 A. Well, to get returns, you have to
02:44:12 3 have one extra day -- right? -- it takes two days
02:44:16 4 to calculate one return. Then you can reuse the
02:44:19 5 second of those days for the second return.

02:44:21 6 So the number of day -- your
02:44:24 7 question was about the number of days involved,
02:44:28 8 and the days and the returns are not identical.

02:44:30 9 Q. I see. Okay. So the -- but the
02:44:35 10 number of days -- the Number 2,007 in this chart
02:44:41 11 does refer to days. Is that right?

02:44:44 12 A. It refer- -- it does refer to days,
02:44:52 13 but it does not count all of the days that are
02:44:56 14 involved in creating this little chart. There's
02:45:00 15 one more day involved. That's all I meant to
02:45:03 16 point out. And it's only because of the way you
02:45:06 17 framed your question.

02:45:07 18 Q. Okay. Turning to the "News Event?
02:45:10 19 Yes" row.

02:45:10 20 Do you see that?

02:45:11 21 A. Yes.

02:45:11 22 Q. And on "News Event? Yes," it
02:45:13 23 appears that Dr. [REDACTED] has identified four days on
02:45:16 24 which there was a Ripple key milestone news event
02:45:19 25 and also unusual daily XRP returns. Is that

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02:45:23 1 right?

02:45:23 2 A. Yes.

02:45:25 3 Q. Okay. And the Number 1 is one day
02:45:30 4 on which Dr. [REDACTED] has identified a Ripple key
02:45:33 5 milestone news event, and that day there were
02:45:36 6 regular daily XRP returns. Is that right?

02:45:41 7 A. Correct.

02:45:42 8 Q. Okay. And the total number of days
02:45:43 9 on which Dr. [REDACTED] observed a Ripple key milestone
02:45:47 10 news event in this period is five. Is that right?

02:45:51 11 A. Yes.

02:45:52 12 Q. Okay. Do you agree that there is a
02:45:59 13 statistically significant correlation between the
02:46:02 14 Ripple key milestone news events identified by
02:46:07 15 Dr. [REDACTED] and the categorization of trading days
02:46:12 16 into unusual and regular?

02:46:13 17 MR. FIGEL: Objection.

02:46:19 18 A. Despite my coffee, I do need -- I
02:46:23 19 apologize, I do need to hear the question again.

02:46:25 20 Q. Of course. Do you agree that there
02:46:28 21 is a statistically significant correlation between
02:46:32 22 Ripple key news event- -- strike that.

02:46:34 23 Do you agree that there is a
02:46:35 24 statistically significant correlation between
02:46:37 25 Ripple key milestone news events, identified by

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02:46:40 1 Dr. [REDACTED], and the categorization of trading days
02:46:46 2 into the categories "Unusual" and "Regular"?

02:46:48 3 MR. FIGEL: Objection.

02:46:55 4 A. Measured in terms of the
02:46:57 5 hyp- -- the nonstandard hypergeometric
02:47:00 6 distributional analysis that Dr. [REDACTED] introduces
02:47:06 7 for his work in this case, I do agree that there
02:47:14 8 is a p-value that is significant in relation to
02:47:19 9 the 95 percent confidence level.

02:47:25 10 Measured in terms of a standard
02:47:27 11 event study, I don't know because Dr. [REDACTED] doesn't
02:47:32 12 tell us.

02:47:33 13 Q. What is it that's missing from
02:47:44 14 Dr. [REDACTED] analysis that leads you to say that,
02:47:48 15 measured in terms of a standard event study, you
02:47:51 16 don't know?

02:47:51 17 MR. FIGEL: Objection.

02:47:51 18 A. Well, one completely standard
02:47:59 19 approach would be to have a pooled regression
02:48:04 20 analysis that encompasses all of the event dates
02:48:10 21 of the particular kind he's interested in here
02:48:14 22 with an indicator variable that turns on for
02:48:23 23 events of that kind included in the regression.

02:48:26 24 That's a zero-one variable that
02:48:30 25 turns -- that exists, is populated for all of the

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02:48:32 1 dates in the analysis, but is mostly equal to zero
02:48:40 2 and equal to 1 just on the event dates. That
02:48:43 3 variable would have a coefficient. That
02:48:46 4 coefficient would have a corresponding T
02:48:52 5 statistic.

02:48:53 6 And although it is likely that,
02:48:55 7 based on what I'm seeing here, that the -- that
02:49:02 8 that approach would yield -- it may well yield a
02:49:06 9 statistically significant result, we don't
02:49:09 10 actually know, because Dr. [REDACTED] analysis doesn't
02:49:13 11 actually produce that result.

02:49:14 12 So that's what I mean when I say I
02:49:20 13 can't really tell what a stand- -- what a standard
02:49:27 14 event study using indicator -- an indicator
02:49:28 15 variable would tell us.

02:49:29 16 But in terms of Dr. [REDACTED] somewhat
02:49:39 17 peculiar hypergeometric analysis, yes, I agree,
02:49:44 18 there's -- he gets a p-value that is less than
02:49:47 19 .05.

02:49:48 20 Q. It looks like, at least in part,
02:49:50 21 your paragraph 18 summarizes Dr. [REDACTED] analysis
02:49:56 22 with respect to these four unusual days that are
02:49:59 23 displayed in Table 1. Is that fair?

02:50:05 24 A. I need to read it.

02:50:06 25 Q. Sure.

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02:50:21 1 A. (Document review.)

02:50:22 2 Yes, it's intended to be an
02:50:23 3 explanation of Dr. [REDACTED] finding.

02:50:27 4 Q. And is it fair to say that, as
02:50:29 5 described in your paragraph 18, you do not dispute
02:50:32 6 Dr. [REDACTED] finding with respect to his
02:50:35 7 characterization of these four unusual days?

02:50:38 8 MR. FIGEL: Objection.

02:50:43 9 A. I certainly strongly stand by my
02:50:46 10 paragraph 18. So I -- if that's what -- if you're
02:50:56 11 asking me whether I agree with what I say in my
02:50:59 12 paragraph 18, unambiguously, yes.

02:51:03 13 Q. Okay. And to make sure I'm reading
02:51:05 14 your paragraph 18 correctly --

02:51:07 15 A. Yes.

02:51:07 16 Q. -- at least with respect to
02:51:13 17 Dr. [REDACTED] conclusions based on his analysis of the
02:51:16 18 four unusual daily XRP return days that correspond
02:51:22 19 with the Ripple key milestone news events, you
02:51:25 20 don't dispute his conclusion of statistical
02:51:30 21 significance?

02:51:31 22 A. Within -- yes, with the important
02:51:34 23 proviso that we are talking about this framework
02:51:42 24 of performing the analysis within a hypergeometric
02:51:45 25 distribution looking for what he calls a

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02:51:50 1 correlation, but in -- again, not in the sense in
02:51:58 2 which that term is usually used.

02:52:00 3 It's not a correlation coefficient.
02:52:03 4 It's not a nonparametric correlation coefficient.
02:52:08 5 It -- it measures the English language concept of
02:52:10 6 correlation, not the statistical concept, and it
02:52:16 7 is a statistically significant finding within that
02:52:19 8 framework. I do agree with that.

02:52:21 9 Q. Do you believe -- actually, strike
02:52:21 10 that.

02:52:27 11 Let me hand you Exhibit 2.

02:52:28 12 (Exhibit LM-2, Amended expert
02:52:28 13 report of Dr. [REDACTED], marked for
02:52:41 14 identification, as of this date.)

02:52:41 15 Q. Dr. Marais, I'm handing you
02:52:43 16 Exhibit 2. Is LM-2 Dr. [REDACTED] amended expert
02:53:00 17 report submitted in this case?

02:53:01 18 A. I recognize it as being that.

02:53:03 19 Q. Okay. Let's turn to paragraph 12a
02:53:09 20 of Exhibit 2, please.

02:53:22 21 A. I'm there.

02:53:23 22 Q. Okay. The first bolded sentence in
02:53:26 23 12a of Dr. [REDACTED] report says:

02:53:29 24 "XRP prices react to certain news
02:53:31 25 and public statements about Ripple's

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02:53:33 1 actions."

02:53:34 2 Do you see that?

02:53:35 3 A. Yes.

02:53:35 4 Q. Do you dispute Dr. [REDACTED] conclusion
02:53:39 5 that I just read?

02:53:41 6 A. I would say, at best, unproven.

02:53:53 7 Q. Okay. Let's move on to the next
02:53:55 8 sentence:

02:53:56 9 "Using a well-accepted event study
02:53:57 10 methodology, I find statistically significant
02:53:59 11 evidence that XRP prices react to news about
02:54:02 12 Ripple's actions."

02:54:04 13 Do you see that?

02:54:04 14 A. I see. I do see it.

02:54:06 15 Q. Okay. Do you dispute that
02:54:07 16 sentence?

02:54:12 17 A. Properly read and interpreted in
02:54:15 18 the context of his report, I understand what the
02:54:18 19 sentence means. The sentence is misleading.

02:54:22 20 Q. Please tell me why.

02:54:26 21 A. The statistically significant
02:54:27 22 evidence that he finds is the correlation, the
02:54:34 23 coincidence between certain days that he's labeled
02:54:36 24 news days and certain days that he has labeled, in
02:54:40 25 my terminology, unusual returns days.

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02:54:50 1 Now, there is the well-known
02:54:52 2 truism -- which doesn't mean it is false, it is
02:54:55 3 true -- that association is not causation. And
02:54:59 4 correlation is association.

02:55:04 5 So the statistical significance of
02:55:07 6 the finding is suggestive of correlation and
02:55:17 7 causes us, if we accept the evidence of the
02:55:19 8 p-value of the statistical significance, causes me
02:55:24 9 to agree that this is -- this is evidence that has
02:55:28 10 passed the usual thresholds for association.

02:55:37 11 It is a large step from there to
02:55:42 12 causation. And p-values don't tell you causation.
02:55:46 13 And observational studies have great difficulty in
02:55:51 14 telling you causation. And event studies are
02:55:54 15 observational studies.

02:55:55 16 And where event studies are used in
02:55:59 17 scholarly research, they have a property that is
02:56:04 18 simply absent from Dr. [REDACTED] work in this case
02:56:11 19 that goes to the issue of causation.

02:56:20 20 Q. What property is absent from
02:56:22 21 Dr. [REDACTED] work in this case that goes to the issue
02:56:23 22 of causation?

02:56:28 23 MR. FIGEL: Objection.

02:56:29 24 A. Event studies including the event
02:56:31 25 studies that are referred to by Dr. [REDACTED] Joo

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02:56:39 1 reference to an article by a pair of Scandinavians
02:56:49 2 with unpronounceable names for the generalized
02:56:53 3 rank test, that Dr. [REDACTED] ultimately imports into
02:56:57 4 his own work, are typically, in academic research,
02:57:06 5 performed for groups of firms.

02:57:08 6 For example, do financial firms'
02:57:12 7 stock prices respond to their earnings
02:57:14 8 announcements? What that means is that there are
02:57:21 9 large cross sections, and ideally in those large
02:57:26 10 cross sections, the event dates don't coincide for
02:57:30 11 different firms. So different firm announcements
02:57:33 12 on different dates.

02:57:34 13 That adds a dimension that helps --
02:57:39 14 it doesn't fully distinguish between correlation
02:57:42 15 and causation, but it adds a dimension that is
02:57:47 16 helpful in moving towards a causal conclusion.

02:57:51 17 In the case of Dr. [REDACTED] work in
02:57:53 18 this case, as is often the case in
02:57:57 19 litigation-related event studies -- so this is --
02:58:01 20 this is not -- I'm not criticizing Dr. [REDACTED]
02:58:04 21 personally for this -- but the problem here is
02:58:07 22 that this is a single price series.

02:58:09 23 It's like a single firm event
02:58:11 24 study, which is not the same thing as a portfolio
02:58:14 25 event study. That makes it particularly difficult

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02:58:20 1 to move from association to causation, as Dr. [REDACTED]
02:58:29 2 himself expressly acknowledges in his report. And
02:58:36 3 I don't see Dr. [REDACTED] bridging that gap in this
02:58:40 4 report.

02:58:40 5 Q. Can you point me to the place in
02:58:46 6 your report where you set forth the critique that
02:58:51 7 you just articulated?

02:58:52 8 A. We've been there already. But we
02:59:00 9 can go back. Let's see. In my conclusion, where
02:59:04 10 you asked me whether these are my conclusions, I
02:59:06 11 note that:

02:59:08 12 "Instead, the [REDACTED] event study
02:59:11 13 cannot prove a causal relationship between
02:59:15 14 Ripple's actions and XRP price movements."

02:59:16 15 That's in the middle of paragraph
02:59:17 16 30. And you spent some time asking me about that
02:59:20 17 earlier, I recall.

02:59:29 18 You -- I remember -- I recall you
02:59:30 19 asking me what I meant when I said "even if it
02:59:34 20 could do so," and I said that refers to the
02:59:37 21 proposition that the [REDACTED] event study cannot prove
02:59:42 22 a causal relationship.

02:59:44 23 Now, that's just the summary
02:59:45 24 statement. I say it back in paragraph 7 where we
02:59:53 25 just were, I think. Paragraph 7 is not the right

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03:00:13 1 paragraph reference.

03:00:17 2 (Document review.)

03:00:18 3 Oh, in paragraph 7, I -- yes, "this
03:00:25 4 language invites a reader ... 'evidence' showing
03:00:26 5 that" it's -- blah, et cetera:

03:00:27 6 "'Evidence' showing that XRP price
03:00:29 7 movements are driven largely" -- and then set
03:00:31 8 apart in between em dashes:

03:00:38 9 "And causally -- by actions taken
03:00:40 10 by Ripple. As I explain below, Dr. [REDACTED]
03:00:46 11 event study is not designed to investigate
03:00:48 12 this proposition."

03:00:50 13 So that's where I am setting it up.
03:00:57 14 I -- so I book-ended it. There are 12 pages in
03:01:01 15 between that I would need to go through to point
03:01:03 16 to where else I reach this point.

03:01:13 17 Q. I would be particularly interested
03:01:14 18 in any places where you could point to that --
03:01:17 19 where you explain why, in your view, the [REDACTED]
03:01:20 20 event study cannot prove a causal relationship
03:01:24 21 between Ripple's actions and XRP prices?

03:01:43 22 A. I take it you mean apart from the
03:01:48 23 virtually universally known limitation of
03:01:53 24 observational studies which I've referred to.

03:02:05 25 Q. Where are you reading from, Doctor?

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03:02:06 1 A. I'm not reading.

03:02:13 2 Q. Oh.

03:02:14 3 A. I was thinking about what kind of
03:02:16 4 statement I'm looking for.

03:03:18 5 (Document review.)

03:03:18 6 In paragraph 20, I bring up,
03:03:23 7 without using the term "confounding," the
03:03:33 8 confounding hypothesis of the -- the point being
03:03:46 9 the apparent absence of any attempt by Dr. [REDACTED] to
03:03:52 10 rule out, even by searching for news events
03:03:57 11 related to cryptocurrency other than going to
03:04:04 12 Ripple's repository of news releases and links, I
03:04:11 13 mean, there's no indication that I find that
03:04:17 14 Dr. [REDACTED] has searched widely for answers to the
03:04:20 15 question, Well, what else happened on those days?

03:04:23 16 That's called confounding. And if
03:04:28 17 there is a confounding factor operating, you
03:04:34 18 really can't say what the association is with or
03:04:36 19 what the potential cause is.

03:04:42 20 So I'm noting confounding as a
03:04:44 21 discussion in paragraph 20. In sum, I say "the
03:04:48 22 association," and that's a carefully chosen word:

03:04:56 23 "Between Dr. [REDACTED] subjectively
03:04:59 24 selected days with Ripple news events and
03:05:02 25 un-" -- "as a matter of fundamental

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03:05:07 1 statistical principles," in which I'm
03:05:09 2 referring to the confounding idea that I just
03:05:11 3 brought up.

03:05:14 4 But the princ- -- when I say
03:05:17 5 "fundamental statistical principle," I've already
03:05:19 6 said -- quoted here the fundamental principle of
03:05:22 7 association is not causation. That is so
03:05:25 8 well-known that most middle schoolers can quote
03:05:28 9 it.

03:05:28 10 So the fact that I'm referring to
03:05:30 11 the association that he has documented here, "as a
03:05:34 12 matter of fundamental statistical principles, does
03:05:38 13 not per se, establish that the key milestones news
03:05:41 14 caused" -- in italics -- the abnormal XRP
03:05:49 15 coincident returns.

03:05:50 16 So he overreaches in his apparent
03:05:57 17 causal claim, I say. That -- I would concede that
03:06:00 18 that is terse, which is unlike me. But it is an
03:06:04 19 explanation of confounding, and the -- a reference
03:06:08 20 to the extreme limitations of observational data.
03:06:19 21 Now, there's probably more. I just paused on
03:06:24 22 paragraph 20.

03:06:25 23 Q. May I ask, in paragraph 20, why you
03:06:28 24 did not use the word "confounding"?

03:06:30 25 A. Because I explained the concept.

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03:06:32 1 Q. No reason not to use the word?

03:06:34 2 MR. FIGEL: Objection.

03:06:34 3 A. There is no -- there is no specific
03:06:35 4 reason not to use the word. I'm not writing for a
03:06:39 5 technical audience in this report. And I could
03:06:45 6 have said "confounding," but then I would have had
03:06:50 7 to explain it anyway.

03:06:51 8 Q. Are single firm event studies used
03:06:54 9 in securities litigation to establish causation
03:06:57 10 from correlation?

03:06:58 11 MR. FIGEL: Objection.

03:06:59 12 A. They are used to find evidence that
03:07:12 13 may then be interpreted based on other
03:07:21 14 considerations as possibly causal or not.

03:07:27 15 They -- the event study per se is
03:07:35 16 incapable of establishing causation for all -- for
03:07:40 17 all of the reasons and more that I've been -- that
03:07:44 18 I've just alluded to.

03:07:51 19 May I ask respectfully, are we done
03:07:53 20 with the previous question, or should I continue
03:07:56 21 finding references to where I flesh out what I am
03:08:01 22 saying about association is not causation and
03:08:04 23 there is a potential for confounding?

03:08:08 24 Q. I think I understand those two
03:08:14 25 principles that you've identified.

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03:08:16 1 Did you, in your work on this case,
03:08:20 2 check for whether there was confounding
03:08:22 3 information on, for instance, the four unusual
03:08:28 4 news days identified in Dr. [REDACTED] Model 5?

03:08:31 5 MR. FIGEL: Objection.

03:08:32 6 A. I did not. I did not need to to
03:08:38 7 arrive at the conclusions that I have arrived at.
03:08:43 8 It was enough for me to -- since that's not a --
03:08:47 9 that's not really front and center in -- in my own
03:08:51 10 opinions, it's enough for me to note that -- it
03:08:56 11 seemed enough for me to note that Dr. [REDACTED] does
03:09:00 12 not seem to have done anything to rule out other
03:09:03 13 factors.

03:09:03 14 Q. And just so the record is clear
03:09:05 15 because I limited my last question, did you check
03:09:07 16 for any confounding information at all as part of
03:09:13 17 your work in this case?

03:09:14 18 A. No, I've -- I -- to be clear, and
03:09:16 19 this may save us some time, I did not change or
03:09:23 20 add to -- except in presentation of some results
03:09:26 21 that Dr. [REDACTED] chose not to highlight -- to
03:09:34 22 Dr. [REDACTED] work, I'm not endorsing his modeling,
03:09:37 23 his index modeling, and I'm not endorsing his news
03:09:41 24 search. But I do accept both as the premise of my
03:09:46 25 work in this case.

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03:09:48 1 Q. Do you have any objection to
03:09:56 2 Dr. [REDACTED] index modeling in this case?

03:09:58 3 MR. FIGEL: Objection.

03:10:15 4 A. I question aspects of his index
03:10:18 5 modeling. It seems to me perfect -- it seems to
03:10:26 6 me fairly reasonable as, sort of, the first
03:10:31 7 preliminary thing that one would try.

03:10:35 8 But then there are -- there are
03:10:43 9 other kinds of things that I would think one would
03:10:46 10 want to do that Dr. [REDACTED] does not seem to give any
03:10:50 11 indication that he did as the -- as a, kind of, an
03:10:56 12 obvious refinement of his work.

03:10:59 13 Q. Did you undertake any such
03:11:02 14 refinements to determine whether Dr. [REDACTED] results
03:11:05 15 would change if he had taken the approach that you
03:11:09 16 would prefer?

03:11:11 17 MR. FIGEL: Objection.

03:11:11 18 A. No, I didn't do -- I did not
03:11:13 19 attempt to do what Dr. [REDACTED] seems to have failed
03:11:17 20 to do. And I really didn't need to do anything of
03:11:20 21 the kind to arrive at my key opinions in this
03:11:24 22 case.

03:11:24 23 Q. Turning back to Dr. [REDACTED] paragraph
03:11:32 24 12a. Just want to focus on a portion of a
03:11:49 25 sentence that we've already looked at to make sure

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03:11:52 1 I understand your views. And that's -- Dr. [REDACTED]
03:11:56 2 writes -- this is the first sentence, the second
03:12:01 3 half:

03:12:02 4 "I find statistically significant
03:12:03 5 evidence that XRP prices react to news about
03:12:06 6 Ripple's actions."

03:12:08 7 Is it true, Dr. Marais, that,
03:12:09 8 typically, event studies provide statistically
03:12:12 9 significant evidence of a price reaction to a
03:12:14 10 particular piece of news?

03:12:15 11 MR. FIGEL: Objection.

03:12:15 12 A. Event studies typically measure an
03:12:25 13 association. There is then a question of whether
03:12:33 14 that association represents a reaction. Reaction
03:12:40 15 implies a causal effect that -- in other words,
03:12:45 16 that if the news had not happened, the price
03:12:50 17 movement that is documented would not have
03:12:52 18 happened.

03:12:53 19 That part is sort of an extra
03:13:00 20 statistical meaning and be outside of the strict
03:13:04 21 p-value calculation, regression calculation
03:13:14 22 inference. And that is almost always true with
03:13:18 23 observational data, that you can't just look at
03:13:19 24 what the -- comes out of a statistical calculation
03:13:21 25 and call it a causal effect.

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03:13:24 1 Dr. [REDACTED] recognizes that expressly
03:13:27 2 and writes as much in his own report. Now, he
03:13:31 3 says there are things that you have to do to reach
03:13:39 4 a causal -- causal conclusion, and then he doesn't
03:13:42 5 appear to do them.

03:13:43 6 And yet, here at the beginning, he
03:13:44 7 states that he has evidence of a price reaction,
03:13:46 8 meaning causation. That's kind of a gap in -- a
03:13:55 9 logical gap in [REDACTED].

03:13:59 10 Q. Let me make sure I understand your
03:14:02 11 answer. There's one set of circumstances in which
03:14:04 12 an event study could per se prove causation, and
03:14:06 13 there's another set of circumstances in which an
03:14:13 14 event study could provide evidence of causation.

03:14:14 15 Are you with me so far?

03:14:16 16 A. No, I'm not.

03:14:16 17 Q. Okay. I'm just trying to
03:14:17 18 understand your answer. I think it's your view,
03:14:18 19 correct me if I'm wrong, that -- backing up from
03:14:20 20 Dr. [REDACTED] report -- in general, the results of an
03:14:25 21 event study do not per se prove causation.

03:14:28 22 A. I think that's fair.

03:14:29 23 Q. Okay. Again, at a level of
03:14:30 24 generality, I'm asking, are event studies
03:14:34 25 typically used to provide evidence toward or

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03:14:38 1 against a conclusion of causation?

03:14:40 2 A. Yes.

03:14:44 3 Q. Okay.

03:14:44 4 A. That's fair as a very general
03:14:48 5 characterization.

03:14:49 6 Q. Okay. And is it your view in this
03:14:51 7 case that Dr. [REDACTED] study fails to provide
03:14:56 8 statistically significant evidence that XRP prices
03:14:59 9 react to news about Ripple's actions?

03:15:02 10 A. No, that's not my view.

03:15:09 11 Q. Okay. What evidence does Dr. [REDACTED]
03:15:15 12 study -- let me rephrase.

03:15:16 13 What statistically significant
03:15:18 14 evidence does Dr. [REDACTED] study provide that XRP
03:15:24 15 prices react to news about Ripple's actions?

03:15:28 16 MR. FIGEL: Objection.

03:15:28 17 A. We have already discussed in the
03:15:29 18 context of one -- a paragraph in my report, my
03:15:38 19 explication of Table 1, that is Table 1 from my
03:15:50 20 report. So I have Table 1 on page 7, and then I
03:15:53 21 have paragraph 18. And you asked me whether
03:15:54 22 paragraph 18 describes what I understand to be
03:15:58 23 Dr. [REDACTED] process of logic.

03:16:04 24 And I -- I agree that that is his
03:16:07 25 process of logic, which leads to a finding of

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03:16:11 1 statistical significance. But it is a
03:16:14 2 statistically significant correlation, a
03:16:21 3 statistically significant association in a certain
03:16:23 4 way. I test -- well.

03:16:28 5 Q. So is it your view that -- I'm now
03:16:30 6 looking at your Table 1.

03:16:31 7 A. I'm there.

03:16:32 8 Q. Okay. Is it your view that
03:16:33 9 Dr. [REDACTED] conclusion that there was a
03:16:39 10 statistically significant correlation between --
03:16:47 11 in Model 5 news events and unusual daily XRP
03:16:54 12 returns, is that, in your view, evidence, that at
03:17:00 13 least for this set of occasions, Ripple's actions
03:17:03 14 affected XRP's prices?

03:17:05 15 MR. FIGEL: Objection.

03:17:06 16 A. It is evidence. It is a -- it's
03:17:20 17 small, but it documents -- it's a little patch of
03:17:24 18 evidence that documents the idea of association
03:17:28 19 between a category of Ripple news events and
03:17:33 20 unusual trading days for XRP.

03:17:39 21 It's an association. That -- that
03:17:45 22 is evidence that weighs in favor but does not
03:17:49 23 establish causation. It's just -- it's one --
03:17:57 24 it's one tiny weight on a scale. It is that. But
03:18:06 25 you need some more stuff as Dr. [REDACTED] himself

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03:18:14 1 explains.

03:18:14 2 Q. What is the "more stuff" that is
03:18:16 3 needed -- strike that.

03:18:19 4 Well, let me ask the question.
03:18:20 5 I'll use your terminology.

03:18:21 6 What is the "more stuff" that is
03:18:23 7 needed in your view?

03:18:25 8 MR. FIGEL: Objection.

03:18:25 9 A. Well, it is generally accepted by
03:18:37 10 people in my field that you can never get exactly
03:18:44 11 all the way by pure deductive logic. There will
03:18:55 12 remain a leap at the end. But you can search hard
03:18:59 13 for confounding factors and rule them out.

03:19:06 14 You can construct explanations for
03:19:27 15 the plausibility of the effect that -- for
03:19:29 16 example, discussions by analysts or market
03:19:35 17 commemorators on the crypto space or on XRP, in
03:19:41 18 particular, saying at about the same time or the
03:19:49 19 day after that this was a really important move
03:19:53 20 for XRP, and speaking to the plausibility of the
03:20:03 21 causal linkage.

03:20:07 22 I think Dr. [REDACTED], where he refers
03:20:10 23 to this, mentions three things, and I'm forgetting
03:20:14 24 his third thing. But there is -- he refers to,
03:20:18 25 under certain conditions, an event study finding

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03:20:22 1 can point to causation.

03:20:26 2 And I've mentioned two kinds of
03:20:28 3 factors which look kind of like Bradford Hill
03:20:33 4 criteria for the case of inferring causation from
03:20:35 5 an event study.

03:20:37 6 Q. When you say you've mentioned two
03:20:39 7 kinds of factors, is one of those factors
03:20:43 8 confounding news?

03:20:45 9 A. The search for confounding factors.

03:20:49 10 Q. Okay. That I understand. And I
03:20:51 11 understand is embodied perhaps in other places,
03:20:55 12 but you've identified as embodied in paragraph 20
03:20:58 13 of your report?

03:20:59 14 A. Yes.

03:20:59 15 Q. Okay. The second factor I don't
03:21:02 16 understand -- I think you just articulated it. I
03:21:05 17 didn't follow it. Can you point it to me in your
03:21:07 18 report?

03:21:07 19 A. No, my report doesn't -- my report
03:21:16 20 has -- my report makes the point association is
03:21:18 21 not causation. And we are now well beyond the
03:21:20 22 level of detail that I get into in my report.

03:21:23 23 Q. I see.

03:21:23 24 A. On the theme, prompted I hope by
03:21:28 25 your questions, I hope I'm not just on a riff

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03:21:32 1 here. But I thought that you were asking me
03:21:36 2 about, well, what's necessary to get from
03:21:41 3 association to causation. So I did not mean to be
03:21:44 4 pointing to something that is in my report.

03:21:46 5 These are very, completely general
03:21:48 6 statistical precepts that do apply to event
03:21:53 7 studies, but this is not event study stuff I'm
03:21:55 8 talking about now. This is general analysis of
03:22:00 9 observational data as opposed to experimental
03:22:03 10 data.

03:22:03 11 Q. Okay. You've mentioned that
03:22:05 12 confounding news is a factor that can break the
03:22:09 13 link between correlation and causation. Is that
03:22:14 14 fair?

03:22:16 15 A. That can -- what was the verb in
03:22:18 16 that sentence?

03:22:19 17 Q. Break the link.

03:22:20 18 A. Break. No, well, that's not really
03:22:24 19 what I meant to convey. It's a -- I think I can
03:22:27 20 sign on to that statement, but it's not what I was
03:22:30 21 testifying about. I was -- the -- I should wait
03:22:36 22 for a question.

03:22:37 23 Q. Other than -- I want to return to
03:22:51 24 Table 1.

03:22:51 25 A. Whose Table 1?

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03:22:53 1 Q. I'm sorry. Your Table 1, Doctor.
03:23:03 2 Other than Ripple key milestone events -- strike
03:23:03 3 that.

03:23:07 4 I think it's fair to characterize
03:23:09 5 Dr. [REDACTED] conclusions in his report that Ripple
03:23:12 6 key milestone events are the cause of the unusual
03:23:19 7 daily XRP returns on the four days identified in
03:23:22 8 your Table 1.

03:23:25 9 Would you agree with that?

03:23:26 10 A. I don't know from memory alone
03:23:37 11 whether he actually says that. I do agree that
03:23:42 12 he -- where he is summarizing in his summary of
03:23:45 13 opinions he has landed on XRP prices react.

03:23:49 14 But whether -- when he is
03:23:51 15 specifically talking about the milestone events,
03:23:53 16 whether he has language in there that suggests
03:23:56 17 there that he concludes that, I don't recall. The
03:23:59 18 report is right in front of me. I can find it.

03:24:01 19 Q. That's okay, Doctor. It's a fair
03:24:03 20 point. I may have overstated it. Let me put it
03:24:06 21 this way: One of the things -- just looking at
03:24:09 22 Dr. [REDACTED] results as summarized in your Table 1,
03:24:13 23 one of the things that may have caused the unusual
03:24:19 24 daily XRP return on the four days reported in this
03:24:23 25 chart is the Ripple key milestone news events.

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03:24:27 1 That's one possibility, right?

03:24:27 2 A. That is a hypothesis, yes.

03:24:30 3 Q. And there's also a possibility that
03:24:32 4 there were confounding news events that caused
03:24:35 5 XRP's price to be unusual, the daily XRP returns
03:24:40 6 to be unusual on that day. Is that right?

03:24:42 7 A. That is also possible.

03:24:44 8 MR. FIGEL: Objection.

03:24:45 9 Q. Okay. Is there anything else that
03:24:46 10 you can think of besides Ripple key milestone news
03:24:50 11 events or confounding news events that might have
03:24:53 12 caused the unusual daily XRP return on those four
03:24:56 13 unusual days in your Table 1?

03:24:58 14 A. I can't think of anything else that
03:25:09 15 is a, as Dr. [REDACTED] puts it, a nonrandom systematic
03:25:15 16 cause. As long as one defines confounding news
03:25:20 17 events broadly enough. And what I mean by that is
03:25:28 18 there could be, you know, here's a hypothetical:

03:25:31 19 So the European Central Bank takes
03:25:35 20 some action to either outlaw or to authorize the
03:25:37 21 use of XRP for paying taxes in European countries.
03:25:44 22 I suppose -- we get back to the point of, you
03:25:49 23 know, is it news or is it the action or is it --
03:25:52 24 are those distinguishable at all, because how
03:25:55 25 would you know about the action if the news didn't

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03:25:59 1 get to you?

03:26:01 2 Well, maybe you would know about
03:26:03 3 the action because the action was taken but not
03:26:05 4 reported, but somebody traded an enormous chunk
03:26:10 5 of -- I can think of stories that don't quite
03:26:14 6 involve news, but that -- so events more in a
03:26:16 7 broader category than just news disclosures. But
03:26:24 8 something happened, some confounding thing.

03:26:29 9 Whether or not it's the sort of
03:26:30 10 thing that you would pick up in a news index
03:26:33 11 looking for XRP-related news on that day.

03:26:38 12 Q. Can we take a look at -- let's go
03:26:48 13 back to your report, please, paragraphs 13 and 15.

03:26:56 14 A. 13 and 15.

03:26:57 15 Q. Yes.

03:27:07 16 A. I'm there.

03:27:09 17 Q. Okay. Is it fair to say that in
03:27:10 18 paragraphs 13 and 15, you summarize certain
03:27:12 19 aspects of Dr. [REDACTED] methodological design?

03:27:15 20 A. Give me just a moment to ...

03:27:33 21 (Document review.)

03:27:34 22 That seems like a fair
03:27:35 23 characterization to me.

03:27:36 24 Q. Do you have any critique of
03:27:41 25 Dr. [REDACTED] methodological design as set forth in

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03:27:44 1 your paragraphs 13 and 15?

03:27:46 2 MR. FIGEL: Objection.

03:27:46 3 A. Well, paragraphs 13 and 15 are
03:27:49 4 really just a tabulation of how in the world is it
03:27:51 5 that he comes up with 400 alternative ways of
03:27:55 6 doing the thing.

03:27:59 7 The methodological design isn't
03:28:02 8 really set forth in paragraphs 13 and 15. I do
03:28:05 9 have some critiques. You asked me earlier and I
03:28:09 10 said I do. But they aren't identified or easily
03:28:14 11 linked to paragraphs 13 and 15 for the reason that
03:28:18 12 I just testified about.

03:28:19 13 Q. And -- understood. Thank you.
03:28:22 14 What -- to make sure we have a clear record, what
03:28:27 15 are your critiques -- -- strike that.

03:28:30 16 Setting aside the confounding news
03:28:35 17 issue, which we've discussed, what are your other
03:28:38 18 critiques of Dr. [REDACTED] methodological design, if
03:28:43 19 any?

03:28:43 20 A. I want to clarify first. I said
03:28:53 21 critiques. And I was actually more accurate in
03:28:55 22 characterizing what I am talking about here in a
03:28:58 23 previous answer when I explained that we are --
03:29:04 24 we've reached issues that I did not need to go
03:29:06 25 into for my opinions in this case.

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03:29:10 1 And so they are questions in my
03:29:11 2 mind about what is this? This is fine for the
03:29:19 3 first thing you would think of doing, but what is
03:29:23 4 the second thing you would think of doing and what
03:29:23 5 might you learn from that?

03:29:28 6 So these are questions that might
03:29:29 7 very well lead to critiques. But I did not
03:29:33 8 develop a detailed critique. I didn't need to.

03:29:35 9 But given that qualification, it is
03:29:43 10 striking to me that Dr. [REDACTED] analysis is
03:29:49 11 concerned with distinguishing nonsystematic,
03:29:54 12 nonrandom systematic effects as he calls them in
03:29:57 13 his technical appendix from everyday price
03:30:07 14 movement, and yet he allows days of putative
03:30:14 15 nonrandom systemic price movements into his
03:30:18 16 estimation -- his rolling estimation periods.

03:30:24 17 So when he is analyzing, for
03:30:27 18 example, the five milestone event days, he has --
03:30:35 19 as he explains this, he calls them rolling -- I
03:30:43 20 think they're actually sliding, not rolling -- he
03:30:46 21 has this sliding 180-day window that follows along
03:30:49 22 each analysis day.

03:30:50 23 But when he comes to his other
03:30:53 24 analysis, he has different event days. And he
03:30:56 25 simply ignores the fact that he is allowing to

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03:30:58 1 creep into his estimation days the same days that
03:31:02 2 a moment ago he was treating as event days with
03:31:06 3 potential nonrandom systematic effects.

03:31:12 4 And I -- I note that there are as
03:31:17 5 many as 500 days of potential nonrandom systematic
03:31:20 6 effects during the 2,000 or so days of his event
03:31:27 7 period, of his analysis period.

03:31:30 8 And because of the way he does his
03:31:32 9 analysis, every time he switches gears to a new
03:31:35 10 category of news events, it's as if he forgets
03:31:38 11 about the fact that he just a moment ago was
03:31:41 12 talking about days with nonrandom systematic
03:31:44 13 effects, and he now includes them in the
03:31:46 14 estimation period, the baseline estimation period.
03:31:52 15 So I -- I question that element of his -- of his
03:32:01 16 work.

03:32:09 17 But I -- so let me be clear, that
03:32:10 18 is not a detailed critique, and it -- I don't know
03:32:13 19 what one would learn from exploring that point.
03:32:17 20 But there would be a logical coherence to
03:32:20 21 excluding all of the event -- the potential event
03:32:23 22 days from estimating the index model.

03:32:25 23 Q. Is the critique that you just
03:32:27 24 described one of the bases for the opinions that
03:32:30 25 you're providing in this case?

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03:32:32 1 A. No. I don't need to get into this.
03:32:35 2 As I've already testified, I think expressly just
03:32:37 3 a minute ago, I don't need to get into that
03:32:40 4 territory to arrive at my opinions in this case.

03:32:43 5 Q. Other than your -- strike that.

03:32:55 6 Other than confounding news, which
03:32:57 7 we've discussed, are there other critiques of
03:33:01 8 Dr. [REDACTED] methodology in this case that underlie
03:33:05 9 your opinions set forth in your report?

03:33:08 10 A. I'm sorry, but your question as you
03:33:11 11 frame it seems to say something about my testimony
03:33:15 12 that I don't think I meant to convey in the way
03:33:19 13 that your question characterizes it.

03:33:24 14 Q. Do you think that Dr. [REDACTED], in
03:33:27 15 your -- it's your view that Dr. [REDACTED] failed to
03:33:32 16 look for confounding news. Is that correct?

03:33:34 17 A. Yes.

03:33:35 18 Q. Is this a methodological flaw in
03:33:39 19 your view?

03:33:39 20 A. It's a question I would raise, and
03:33:45 21 it has a strong potential to be a methodological
03:33:48 22 flaw. It certainly means that he can't rule out
03:33:51 23 confounding.

03:33:52 24 Q. Is the failure to look
03:33:57 25 for -- strike that.

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03:33:58 1 Does Dr. [REDACTED] failure to look for
03:34:00 2 confounding news render his opinions about
03:34:04 3 statistical significance unreliable?

03:34:09 4 A. No. I don't see how it does quite
03:34:18 5 that, for the -- within the narrow scope of what
03:34:23 6 his opinions about statistical significance are
03:34:26 7 about and what they convey, I don't think that
03:34:33 8 they are rendered unreliable by that oversight per
03:34:46 9 se period.

03:34:46 10 Q. Is there anything about Dr. [REDACTED]
03:34:48 11 methodological design that, in your view, renders
03:34:51 12 his results unreliable?

03:34:53 13 A. With an appropriate understanding
03:35:04 14 of what I mean, and what we mean about his
03:35:11 15 results, I don't -- I've replicated his
03:35:16 16 hypergeometric probability calculations, and I
03:35:20 17 believe they were correctly performed. Those are
03:35:24 18 results.

03:35:26 19 From there on, things get more
03:35:30 20 complicated. What do these results mean? What do
03:35:34 21 they convey? But as far as those results are
03:35:38 22 concerned; in other words, p-values attached to
03:35:42 23 certain two-by-two tables like my table,
03:35:45 24 illustrative Table 1, his calculations are not --
03:35:49 25 are neither unreliable nor wrong.

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03:35:56 1 Q. In paragraph 14 of your report, you
03:35:58 2 discuss Dr. [REDACTED] categorization of Ripple news.
03:36:05 3 Is that right?

03:36:05 4 A. Yes.

03:36:06 5 Q. Is there anything about Dr. [REDACTED]
03:36:14 6 categorization of Ripple news that renders his
03:36:19 7 results unreliable here?

03:36:20 8 A. There's nothing beyond what I say
03:36:22 9 in paragraph 14 that comes to mind that I would
03:36:33 10 point to sitting here this afternoon. That is not
03:36:35 11 the same as an endorsement. I don't have an
03:36:38 12 opinion -- I really am not expressing an opinion
03:36:43 13 one way or another to begin with about what it
03:36:45 14 would even mean for a categorization of news to be
03:36:50 15 unreliable and then whether this is such an
03:36:52 16 unreliable categorization.

03:36:56 17 I note that there's a certain
03:36:58 18 subjectivity in it. I have no quibble, I have no
03:37:02 19 fight with Dr. [REDACTED] about that. He says himself
03:37:05 20 that it's subjective.

03:37:08 21 There may be other things that, if
03:37:10 22 I had reason to delve into what he did that I
03:37:14 23 might find at least questionable, but I don't have
03:37:18 24 such a thing in mind as I sit here this afternoon.
03:37:21 25 That's just not an area I needed to go into for

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03:37:25 1 the opinions I have in this -- arrived at in this
03:37:29 2 case.

03:37:29 3 Q. Okay. Is there a generally
03:37:34 4 accepted statistical or economic methodology to
03:37:36 5 identify relevant news days?

03:37:39 6 MR. FIGEL: Objection.

03:37:45 7 A. There are informal professional
03:37:55 8 standards that have emerged in scholarly work and
03:38:02 9 separately in litigation settings informed by
03:38:07 10 different imperatives in those two cases. But
03:38:11 11 I -- I wouldn't say there's a set of bright-line
03:38:16 12 standards.

03:38:23 13 Q. Do you have an opinion as to
03:38:26 14 whether Dr. [REDACTED] did or did not follow those
03:38:29 15 standards that you just described in selecting
03:38:32 16 news events?

03:38:33 17 A. I don't -- I don't have -- I'm not
03:38:36 18 proffering an expert opinion on that subject in
03:38:42 19 this matter. I have noted in my report the
03:38:46 20 confounding issue. And I have noted in my
03:38:51 21 testimony here the fact that I find no indication
03:38:54 22 that he's looked for any kind of news other than
03:38:58 23 really the most -- the path of least resistance
03:39:04 24 and effort, which is to go to Ripple's website.

03:39:07 25 Q. Do you --

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03:39:14 1 A. But that doesn't rise to the level
03:39:17 2 of an expert -- a distinct expert opinion that I'm
03:39:21 3 proffering.

03:39:27 4 Q. Do you believe that Dr. [REDACTED]
03:39:29 5 omitted any important news events from his
03:39:32 6 analysis?

03:39:39 7 A. As far as I know, he includes no
03:39:40 8 news event that isn't -- doesn't happen to be
03:39:43 9 listed in some form on Ripple's website. I don't
03:39:47 10 have any reason to think that everything that is
03:39:49 11 important in the world of cryptocurrency price
03:39:55 12 movements generally is listed on Ripple's website.
03:39:57 13 So I don't have a -- I'm not offering an expert
03:40:03 14 opinion.

03:40:03 15 I don't have a fully established
03:40:07 16 and supported belief, but it seems likely to me
03:40:11 17 there -- that things must have happened. It can't
03:40:14 18 be that the only cryptocurrency pricing-related
03:40:19 19 events in the world in these 2,000 days all happen
03:40:23 20 to have to be related to Ripple and XRP.

03:40:27 21 Q. But you did not identify any such
03:40:36 22 events. Is that right?

03:40:37 23 A. That's -- I have not done any
03:40:39 24 independent work on searching for news events that
03:40:43 25 Dr. [REDACTED] omitted.

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03:40:46 1 Q. In some of Dr. [REDACTED] regression
03:40:50 2 models, he constructs a returns index of multiple
03:40:54 3 digital assets.

03:40:54 4 Do you have any critiques of that
03:40:59 5 index that Dr. [REDACTED] used in his work in this case?

03:41:05 6 A. I have questions. It raises
03:41:07 7 questions for me that, if I were engaged in work
03:41:10 8 like what Dr. [REDACTED] is doing, I would attempt to
03:41:14 9 answer, and I would write up as part of my work if
03:41:19 10 I ended up propounding anything like what Dr. [REDACTED]
03:41:24 11 propounds.

03:41:26 12 Q. And is it your view that his
03:41:28 13 failure to take those steps renders his results
03:41:31 14 unreliable?

03:41:33 15 A. That's -- I haven't reached that
03:41:37 16 opinion as an independent expert opinion. And I
03:41:48 17 didn't need to go there for purposes of my work in
03:42:02 18 this case.

03:42:02 19 MR. SYLVESTER: I think it would be
03:42:03 20 useful to take a brief break if that's all
03:42:10 21 right, Dr. Marais.

03:42:10 22 THE WITNESS: Certainly.

03:42:11 23 THE VIDEOGRAPHER: The time is 3:41
03:42:11 24 p.m. This concludes Media 4. Off the
03:42:11 25 record.

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04:05:57 1 (Recess taken from 3:41 p.m. to
04:05:57 2 4:04 p.m.)

04:05:57 3 THE VIDEOGRAPHER: The time is
04:05:57 4 4:04 p.m. This begins Media 5. On the
04:06:14 5 record.

04:06:14 6 (Exhibit LM-3, Copy of Table 2
04:06:14 7 from report LM-1, marked for
04:06:14 8 identification, as of this date.)

04:06:15 9 BY MR. SYLVESTER:

04:06:15 10 Q. Dr. Marais, I'm going to hand you
04:06:17 11 what's been marked LM-3. And I will represent to
04:06:20 12 you that LM-3 is just a larger copy of the Table 2
04:06:24 13 that appears in your report, LM-1. So if you
04:06:28 14 prefer to look at your report, that's fine. I
04:06:34 15 just figured that this might be a little easier.

04:06:54 16 Okay. Taking a look at your
04:06:58 17 Table 2, other than the column where it says "[REDACTED]
04:07:02 18 Model Number," are all of the numbers in your
04:07:05 19 Table 2 numbers of days?

04:07:13 20 A. Yes.

04:07:19 21 Q. Okay. And the "Notes" section at
04:07:22 22 the bottom of Table 2 supplies information
04:07:25 23 regarding the ratio of non-coincident unusual days
04:07:30 24 to the number of coincident unusual days. Is that
04:07:35 25 right?

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04:07:35 1 A. Yes.

04:07:47 2 Q. Okay. Turning back to paragraphs
04:07:49 3 25 and 26 of your report.

04:07:57 4 A. I am there.

04:07:58 5 Q. Okay. Do those paragraphs also
04:08:00 6 discuss the ratio between no Ripple news unusual
04:08:02 7 days and Ripple news unusual days?

04:08:05 8 A. Yes.

04:08:07 9 Q. In paragraph 26 --

04:08:17 10 A. I'm sorry, can I --

04:08:18 11 Q. Sure.

04:08:19 12 A. -- define that. Paragraph 25
04:08:22 13 obviously speaks to that ratio. It begins with
04:08:24 14 the words "The ratio."

04:08:27 15 Paragraph 26 is a summary paragraph
04:08:29 16 that does not address ratios per se. It's just a
04:08:29 17 summary of what I would call the upshot of the
04:08:39 18 discussion before, including but not limited to
04:08:44 19 paragraph 25.

04:08:45 20 Q. In addition to the contents of
04:08:53 21 paragraph 25, what are the other bases for your
04:08:57 22 statements in paragraph 26?

04:09:06 23 A. Okay. Well, let me read it
04:09:09 24 carefully.

04:09:09 25 (Document review.)

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04:09:30 1 I would say the actual counts are
04:09:32 2 as important as the -- the ratios are just a way
04:09:36 3 of summarizing disparities. That's all they are.
04:09:43 4 The ratios are not an object in and of themselves.

04:09:44 5 And the only reason I get into
04:09:47 6 ratios at all is that when I was discussing
04:09:50 7 Table 1, I pointed to a disparity in which I ended
04:09:56 8 up saying that -- just to make the point about the
04:10:00 9 disparity, that there was a ratio of -- I thought
04:10:09 10 I had mentioned a ratio in connection with -- I'm
04:10:20 11 not sure if it's there or not. I'm not seeing it
04:10:22 12 right now.

04:10:23 13 But my point is that the discussion
04:10:25 14 is a discussion of disparities in numbers, and the
04:10:30 15 ratios is secondary. It's just illustrative.

04:10:33 16 Q. In that sentence that you just
04:10:35 17 said, disparities of numbers --

04:10:38 18 A. Yes.

04:10:39 19 Q. -- in the case of 26, paragraph 26,
04:10:42 20 do you mean numbers of days?

04:10:45 21 A. Yes.

04:10:56 22 Q. Okay. Looking at Table 2 again,
04:10:58 23 [REDACTED] Model Number 5, there are 2,007 -- strike
04:10:58 24 that.

04:11:08 25 On Table 2, there's a column that

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04:11:12 1 says: "All Trading Days and Analysis Period."

04:11:13 2 Do you see that?

04:11:13 3 A. Yes.

04:11:14 4 Q. Under [REDACTED] -- the corresponding

04:11:18 5 entry for [REDACTED] Number 5 is 2,007. Correct?

04:11:21 6 A. Yes.

04:11:21 7 Q. Okay. And is that 2,007 the same

04:11:25 8 2,007 that is displayed in the bottom-right corner

04:11:33 9 of your Table 1?

04:11:37 10 A. Yes.

04:11:37 11 Q. Okay. Turning back to Table 2,

04:11:39 12 there's a column labeled: "'Unusual' trading days

04:11:42 13 in analysis period."

04:11:44 14 Do you see that?

04:11:44 15 A. Yes.

04:11:45 16 Q. And for Model Number 5, that's a

04:11:47 17 total of 183. Is that right?

04:11:48 18 A. Yes. Yes, it is.

04:11:54 19 Q. Okay. And that corresponds to the

04:11:57 20 183 total unusual days in the first column of

04:12:01 21 Table 1. Is that right?

04:12:12 22 A. Yes.

04:12:12 23 Q. Okay. Similarly, the four unusual

04:12:14 24 yes news event days in Table 1 correspond to the

04:12:19 25 entry of 4 under unusual trading days coincident

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04:12:23 1 with Ripple news in Table 2. Correct?

04:12:26 2 A. Yes.

04:12:27 3 Q. Okay. And the entry of one in
04:12:29 4 regular trading days in Table 2 corresponds to the
04:12:36 5 entry of one in the news event yes regular daily
04:12:38 6 XRP return cell in Table 1. Correct?

04:12:42 7 A. Yes.

04:12:43 8 Q. Okay. And just for the record,
04:12:51 9 the -- starting -- on Table 2 again, there's two
04:12:55 10 categories of unusual trading days, the first
04:12:59 11 coincident with Ripple news, that column
04:13:03 12 identifies days with unusual returns on which
04:13:05 13 there was also a Ripple news event. Correct?

04:13:08 14 A. Yes.

04:13:08 15 Q. Okay. And the next column,
04:13:10 16 no-coincident Ripple news, that identifies days
04:13:14 17 with unusual returns in which there was not a
04:13:16 18 Ripple news event. Correct?

04:13:17 19 A. Yes.

04:13:17 20 Q. Okay. And finally, the third
04:13:19 21 column -- or the column immediately to the right
04:13:21 22 of no-coincident Ripple news -- is regular trading
04:13:23 23 days, and that identifies days in which there was
04:13:28 24 a Ripple news event but no unusual returns.
04:13:32 25 Correct?

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04:13:32 1 A. Again, correct.

04:13:33 2 Q. Okay. Great. For Model Number 5,
04:13:35 3 how many days did Dr. [REDACTED] identify as days with
04:13:40 4 unusual returns on which there was a Ripple news
04:13:42 5 event, any Ripple news event?

04:13:48 6 A. In other words, not limited to key
04:13:50 7 milestones?

04:13:51 8 Q. That's exactly right.

04:14:04 9 A. I don't know that with precision,
04:14:06 10 sitting here, other than to say that the [REDACTED]
04:14:09 11 select categories over near the right-hand end of
04:14:18 12 this table refer to just as the -- just as the 4
04:14:29 13 plus 1 on -- are -- I'm sorry.

04:14:39 14 How many days did he identify with
04:14:40 15 news events? And the answer is the maximum in the
04:14:44 16 select categories, which is the same as the first
04:14:53 17 four categories on this page. It's the union of
04:14:58 18 those with some acquisition dates thrown in, as he
04:15:02 19 describes it. There are 100 and -- a maximum of
04:15:09 20 105, but in the case of Model 5, actually, an
04:15:17 21 actual total of only 90.

04:15:24 22 Q. Can you show me where you're seeing
04:15:26 23 90?

04:15:38 24 A. (Document review.)

04:15:39 25 Coincident?

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04:15:39 1 Q. Let me --

04:15:40 2 A. Yes, I can show you where I'm
04:15:42 3 seeing 90. I am seeing 90 -- the trading days in
04:15:52 4 those three columns are -- the ones with news in
04:16:02 5 the select category are the 24 plus the 66.

04:16:14 6 Q. I see. And that adds up 90?

04:16:19 7 A. That sums to 90. In every other
04:16:21 8 case, you will notice the -- actually what I was
04:16:26 9 about to say is not quite correct. So I'll just
04:16:30 10 stop there.

04:16:31 11 Q. Okay. And just for the record, the
04:16:34 12 right-hand three columns of Table 2 report unusual
04:16:44 13 trading days coincident with Ripple news, unusual
04:16:47 14 trading days not coincident with Ripple news, and
04:16:52 15 regular trading days coincident with Ripple news
04:16:58 16 for all of Dr. [REDACTED] news categories combined. Is
04:17:03 17 that right?

04:17:03 18 A. It's almost right.

04:17:05 19 Q. Go ahead. I'm sorry. Will you
04:17:05 20 explain why it's almost right?

04:17:08 21 A. There are -- these are the [REDACTED] --
04:17:10 22 these are the news categories that Dr. [REDACTED] chose
04:17:13 23 to include in Figure 1 of his report.

04:17:18 24 So I think it's fair to say these
04:17:20 25 are the news categories on which Dr. [REDACTED] -- to

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04:17:31 1 which Dr. [REDACTED] directs the attention of his reader
04:17:34 2 as the basis for -- the key basis for whatever
04:17:38 3 opinions that he arrives at.

04:17:41 4 When one reads the news-gathering
04:17:45 5 section of Dr. [REDACTED] report, he doesn't have only
04:17:50 6 four or maybe five categories in there. He has a
04:17:55 7 total of 14 categories of news events, some of
04:18:00 8 which I gather he just sets aside a priori as not
04:18:06 9 of interest, one of which he tests expressly as a,
04:18:11 10 sort of, a -- from his perspective, internal test
04:18:19 11 of validity. And that is staffing decisions and
04:18:24 12 appointments.

04:18:24 13 And that doesn't show up in his
04:18:26 14 Figure 1. And it doesn't show up as generating
04:18:30 15 significant correlations or associated with
04:18:35 16 significant correlations.

04:18:36 17 So your question was all of -- no,
04:18:40 18 there's a more textured story. I've given you
04:18:43 19 some out -- some elements of it, but it's in
04:18:48 20 Dr. [REDACTED] report anyway. That -- he's the author
04:18:51 21 of it. I'm not the author. I'm just the Cliff's
04:18:54 22 Notes version.

04:18:55 23 Q. In choosing the categories of
04:18:58 24 Dr. [REDACTED] news categorizations to include in
04:19:02 25 Table 2, how did you go about choosing those to

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04:19:06 1 include?

04:19:06 2 A. I just explained, in substance, how
04:19:11 3 I went about it. Dr. [REDACTED] has a Figure 1 in his
04:19:19 4 report. I excerpt, in paragraph 8 of my report,
04:19:29 5 Dr. [REDACTED] Figure 1 from his report which is around
04:19:33 6 page 9 -- no. Page 3. So that's Figure 1 of the
04:19:41 7 [REDACTED] report.

04:19:43 8 Dr. [REDACTED] never, as I read his
04:19:45 9 report, never fully explains the transition from
04:19:51 10 the 14 news categories to what he ends up
04:19:54 11 reporting as the basis of his opinion.

04:20:04 12 But whatever that story is, I go to
04:20:07 13 his Figure 1 for my guidance in -- and you will
04:20:09 14 see that my headings of milestones, trading
04:20:17 15 platforms, customers, commercialization, and
04:20:21 16 select categories track the headings of Dr. [REDACTED]
04:20:25 17 Figure 1.

04:20:25 18 Q. Understood. Thank you. Turning
04:20:28 19 back to your Table 2, for Model 5, how many days
04:20:36 20 did Dr. [REDACTED] identify as days with unusual returns
04:20:40 21 on which there was a Ripple news event, any Ripple
04:20:45 22 news event?

04:20:45 23 A. Table 2 shows for that number
04:20:48 24 exactly what Table 1 showed for that number, which
04:20:54 25 is four.

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04:20:54 1 Q. And what about the select category
04:20:58 2 that combines all the different news category that
04:21:02 3 Dr. [REDACTED] looked at?

04:21:04 4 MR. FIGEL: Objection.

04:21:04 5 A. In the case of Model 5, the answer
04:21:07 6 is 24.

04:21:08 7 Q. Okay. Turning to paragraph 19 of
04:21:12 8 your report, you write:

04:21:17 9 "One striking feature of Dr. [REDACTED]
04:21:19 10 analysis of the tallies shown in Table 1
04:21:23 11 above -- not highlighted by Dr. [REDACTED] -- is
04:21:25 12 that it offers no account of what factors or
04:21:28 13 events caused the remaining 179 (equals 183 -
04:21:33 14 4) unusual trading days to have unusual XRP
04:21:37 15 returns."

04:21:38 16 If we look at Table 2, isn't it
04:21:42 17 true that Dr. [REDACTED] actually offers an opinion as
04:21:45 18 to 20 additional days as being coincident with
04:21:50 19 Ripple news?

04:21:51 20 A. That would be a fair statement if
04:22:08 21 Dr. [REDACTED] did not point to Model 5 and key
04:22:14 22 milestones as an element of evidence in itself.
04:22:21 23 It is -- it ought to be clear to the reader of my
04:22:28 24 paragraph 19 that paragraph 19 is a discussion of
04:22:34 25 Table 1.

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04:22:37 1 And Table 1 is a discussion of a
04:22:48 2 cell from Dr. [REDACTED] Figure 1, which like so many
04:22:53 3 other cells, is shaded in green with a check mark
04:23:00 4 and is discussed all on its own in an entire
04:23:04 5 section of Dr. [REDACTED] report being Section 6(a),
04:23:16 6 ranging from page 29 to 34.

04:23:20 7 In all of those places,
04:23:22 8 table -- Model 5, in conjunction with milestone
04:23:25 9 events, is presented as a piece of evidence that
04:23:31 10 stands on its own.

04:23:44 11 So against that background, it's an
04:23:47 12 entirely reasonable space statement that he
04:23:49 13 presents no account in the context of this
04:23:56 14 purported independent autonomous piece of evidence
04:24:00 15 of what happened on the remaining 179 days.

04:24:11 16 I'll pause there because that, I
04:24:14 17 think, is a fair answer to your question. But I
04:24:17 18 have a whole lot more to say about it.

04:24:19 19 Q. I appreciate the answer to the
04:24:21 20 question. Is it also true that Dr. [REDACTED] presents
04:24:26 21 in his report the results of his various news
04:24:32 22 categories combined in a select category?

04:24:36 23 A. Yes.

04:24:37 24 Q. Okay. You note in paragraph 21
04:24:44 25 that --

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04:24:45 1 A. Whose paragraph 21?

04:24:49 2 Q. Great point, Doctor. In your
04:24:52 3 paragraph 21 of your report, you note that for
04:25:06 4 the -- let me just quote it. That will be easier.

04:25:08 5 In about the middle of the
04:25:10 6 paragraph, you note:

04:25:13 7 "In striking contrast, the same
04:25:14 8 dollar invested and reinvested for the 179
04:25:20 9 non-coincident unusual trading days (plus the
04:25:23 10 two days following each non-coincident day)
04:25:26 11 would have compounded to a total value of
04:25:29 12 \$4,198,673, more than 2.1 million times
04:25:35 13 \$1.99."

04:25:36 14 Do you know what portion of the
04:25:37 15 approximately \$4.2 million in cumulative proceeds
04:25:41 16 you identify as associated with the 179 days was,
04:25:45 17 in fact, associated with the 20 additional news
04:25:47 18 days identified by Dr. [REDACTED]?

04:25:51 19 MR. FIGEL: Objection.

04:25:55 20 A. I don't know that offhand as I sit
04:26:05 21 here, but I do know one can get some sense of it
04:26:08 22 from Table 3 of my report, which may not answer
04:26:18 23 precisely that question, but comes close and
04:26:31 24 teaches that in the same spot where the \$1.99 that
04:26:40 25 is tailored to Dr. [REDACTED] Model 5 and key

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04:26:46 1 milestones appears, adding the additional 20 days,
04:26:52 2 to which you have drawn my attention, gets us to
04:26:55 3 \$482.20 in comparison to \$7,776 with an additional
04:27:13 4 number for the regular trading days.

04:27:19 5 So, yes, one can tell from the way
04:27:22 6 that I have laid out Table 3 that the disparity is
04:27:29 7 different in magnitude but the disparity
04:27:35 8 continues.

04:27:35 9 Q. The disparity laid out in your
04:27:38 10 paragraph 19 is 2.1 million times. Is that right?

04:27:51 11 A. I think you must be referring to
04:27:58 12 paragraph 21?

04:27:59 13 Q. I am. Thank you for the
04:28:02 14 correction.

04:28:02 15 A. Yes.

04:28:02 16 Q. And the disparity between 7,776 and
04:28:09 17 \$482.20, roughly what's that disparity?

04:28:33 18 A. It is roughly -- sorry. I'm still
04:28:36 19 making my way there.

04:28:38 20 (Document review.)

04:28:38 21 It's -- in very rough, round
04:28:40 22 numbers, it's a 15-fold disparity.

04:28:42 23 Q. So the disparity drops from
04:28:44 24 2.1 million X to approximately 15X?

04:28:47 25 A. That's correct.

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04:28:48 1 Q. Turning to paragraph 21 of your
04:28:58 2 report -- actually 21 this time -- you discuss
04:29:06 3 consideration of magnitudes of returns.

04:29:09 4 Do you see that?

04:29:12 5 A. I'm sorry. We're in paragraph 21
04:29:19 6 of my report?

04:29:21 7 Q. That's right. And the first
04:29:22 8 sentence says:

04:29:25 9 "Simple tallies of news event
04:29:27 10 occurrences with and without coincidences
04:29:31 11 with unusual XRP returns, lacking any
04:29:33 12 consideration of the magnitudes of these
04:29:36 13 returns, provide no indication of the
04:29:37 14 economic magnitude of the disparity between
04:29:40 15 the four coincident and 179
04:29:42 16 non-coincident trading days."

04:29:44 17 Do you see that?

04:29:46 18 A. Yes, I do.

04:29:46 19 Q. Okay. What do you mean by
04:29:48 20 magnitude of returns and/or magnitude of disparity
04:29:52 21 in that sentence?

04:30:02 22 A. I mean that contrary to what I
04:30:04 23 would expect to find in a standard event study
04:30:06 24 where there are concepts like end-point metrics,
04:30:13 25 like cumulative abnormal returns, possibly turned

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04:30:18 1 into total amounts of dollar value changes so
04:30:30 2 frequently expressed in dollar magnitudes.
04:30:32 3 There's nothing in Dr. [REDACTED] dry
04:30:39 4 abstraction of colored marbles in
04:30:41 5 a -- hypothetical colored marbles in -- and
04:30:44 6 p-values that he analogizes to, draws from an urn
04:30:53 7 full of marbles, that measures the magnitude of
04:31:02 8 what he purports to identify or measures the
04:31:05 9 magnitude of what he does not explain, which is
04:31:14 10 the -- in the case of each discrete analysis that
04:31:21 11 he performs, such as the milestones or the select
04:31:25 12 category, each of which he rep- -- he presents as
04:31:26 13 yet another application of the same results. See,
04:31:30 14 here's another of the same -- of the same general
04:31:31 15 result.

04:31:32 16 They all look like just a check
04:31:34 17 mark against a green background in Dr. [REDACTED] work.
04:31:37 18 That gives no indication of the economic magnitude
04:31:42 19 which -- you know, which is sometimes called
04:31:43 20 practical significance or clinical significance of
04:31:51 21 the result that he arrives at.

04:31:52 22 Now, what I show is in the case
04:31:54 23 looking only at the milestones, there is a
04:32:02 24 2.1 million fold discrepancy as -- I have no
04:32:08 25 trouble calling the piece of the total abnormal

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04:32:10 1 day unusual return that is associated with the
04:32:16 2 effect that he documents under milestones a sliver
04:32:20 3 at 1.21 millionth.

04:32:25 4 And if you go to the other end of
04:32:27 5 his table, where he has flung all of his
04:32:31 6 categories -- his key four categories plus
04:32:35 7 acquisitions into the hopper -- I have no problem
04:32:38 8 calling, 1 -- in my own mental arithmetic of a
04:32:43 9 moment ago, I have no trouble calling 1/15 a
04:32:48 10 sliver.

04:32:49 11 That's what I mean by the tallies.
04:33:00 12 Four out of one or four out of five or four out of
04:33:02 13 183 don't tell you anything about the magnitude in
04:33:10 14 the sense -- in the same manner that an ordinary
04:33:12 15 standard event study would do.

04:33:14 16 It doesn't reveal to you the
04:33:22 17 slivery nature of what Dr. [REDACTED] has related to
04:33:33 18 purportedly associated with -- not related to in
04:33:34 19 any causal sense -- associated with Ripple news
04:33:38 20 events.

04:33:44 21 Q. What is the result that an ordinary
04:33:49 22 standard event study would typically provide that
04:33:53 23 is, in your view, missing from Dr. [REDACTED] report?

04:33:56 24 A. I have -- it is typically a result,
04:33:57 25 especially in a litigation setting, that has some

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04:34:02 1 dollar magnitudes associated with the purportedly
04:34:07 2 statistically significant effects.

04:34:22 3 Q. Let's turn to paragraph 7 of your
04:34:23 4 report.

04:34:43 5 A. I'm there.

04:34:44 6 Q. Is this issue of the -- strike
04:34:44 7 that.

04:34:52 8 You just responded that, in a
04:34:53 9 litigation setting, an event study typically
04:34:56 10 prevents -- strike that.

04:34:57 11 I believe you just testified in a
04:34:59 12 litigation setting, an event study typically
04:35:03 13 presents some dollar magnitudes associated with a
04:35:06 14 purportedly statistically significant effect. Is
04:35:10 15 that right?

04:35:10 16 A. Yes.

04:35:11 17 Q. Okay. Is that concept that you
04:35:16 18 just testified related in any way to the
04:35:18 19 conclusions you reach in paragraph 7?

04:35:19 20 MR. FIGEL: Objection.

04:35:25 21 A. I need to read the paragraph.

04:35:27 22 Q. Please.

04:35:29 23 A. (Document review.)

04:35:53 24 Yes.

04:35:54 25 Q. How are those, the concept that you

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04:35:56 1 just testified about and your conclusions in
04:35:58 2 paragraph 7, related?

04:36:01 3 A. Paragraph 7 covers several patches
04:36:06 4 of territory. But I am thinking of the final
04:36:14 5 sentence:

04:36:15 6 "Properly interpreted, Dr. [REDACTED]
04:36:18 7 event study rebuts rather than supports the
04:36:20 8 conclusion that the price of XRP is primarily
04:36:23 9 a function of disclosures about Ripple's
04:36:25 10 actions."

04:36:34 11 Now, understanding that I am not at
04:36:36 12 all implying that, if I were asked that question
04:36:39 13 de novo, that this is how I would approach --
04:36:46 14 Dr. [REDACTED] analysis is how I would approach that
04:36:46 15 question.

04:36:51 16 Nevertheless, having been asked to
04:36:55 17 assess Dr. [REDACTED] work, I note that in terms of
04:36:57 18 these unusual returns that are a fundamental
04:37:01 19 ingredient of his analysis, most of the pricing --
04:37:11 20 price change action that is captured by the
04:37:13 21 unusual returns happens on days that he does not
04:37:16 22 relate to Ripple news, so that is my basis.

04:37:26 23 That plus the counting of days, but
04:37:31 24 the dollar value as even more than the counting of
04:37:36 25 days, although those two are mutually

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04:37:39 1 corroborative, go -- stands for the proposition
04:37:41 2 that these events that he rebuts rather than
04:37:44 3 supports the conclusion that the price of XRP is
04:37:46 4 primarily a function of disclosures about Ripple
04:37:50 5 actions.

04:38:03 6 Q. So in your view, it's fair to say
04:38:08 7 the magnitude of returns is important to examine
04:38:11 8 in the context of determining whether or not
04:38:16 9 there's a price reaction?

04:38:20 10 MR. FIGEL: Objection.

04:38:21 11 A. As general as that statement is,
04:38:22 12 it's easy to agree with.

04:38:33 13 Q. Let's go back to paragraph 21,
04:38:37 14 please.

04:38:42 15 A. Paragraph --

04:38:43 16 Q. Back to 21, please.

04:38:55 17 A. I'm there.

04:38:55 18 Q. Okay. In paragraph 21 you supply
04:38:58 19 an accumulated total value figure of \$1.99 for the
04:39:03 20 four days reflected in Table 1. Is that right?

04:39:06 21 A. Yes.

04:39:06 22 Q. Okay. Those four days are the days
04:39:09 23 in which there was a key milestone news event and
04:39:11 24 an unusual daily XRP return. Is that right?

04:39:14 25 A. Correct.

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04:39:15 1 Q. Okay. Can you please explain how
04:39:17 2 you arrived at the \$1.99 figure?

04:39:22 3 A. Yes. The -- as I disclose in
04:39:38 4 Footnote 19, in performing this calculation,
04:39:40 5 although I refer to it as "the days," the
04:39:45 6 co- -- four representing the coincident days, I
04:39:50 7 follow in Dr. [REDACTED] footsteps, in that, when he
04:39:56 8 calls a day -- when he labels it as coinciding
04:40:03 9 with -- when he labels it as an unusual return
04:40:06 10 day, that is actually based as, I explained much
04:40:09 11 earlier today, on a small data-mining exercise
04:40:13 12 over the up to three-day window.

04:40:20 13 The -- so while I say these are
04:40:27 14 returns measured over four certain days, as I say
04:40:32 15 in Footnote 19, I use three-day windows. That
04:40:36 16 gives rise to a small complication in that what if
04:40:42 17 a three-day window overlaps with a successor day
04:40:50 18 that is also of the same kind? We wouldn't want
04:40:56 19 to double count the return.

04:40:58 20 So I'm supposing, for
04:41:00 21 example -- and I have not committed these data to
04:41:02 22 memory, so I don't know whether this happens for
04:41:07 23 the milestone events, but it does happen
04:41:11 24 elsewhere, if not for the milestone events.

04:41:14 25 So the -- to be really explicit,

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04:41:18 1 the complication that I am pointing to is what if
04:41:21 2 day two of the first milestone event day of the
04:41:25 3 window, of the three-day window -- day three of
04:41:30 4 the window coincides with another milestone event
04:41:34 5 day? I wouldn't want to double count that day.

04:41:43 6 So the -- the, I guess, economical
04:41:48 7 explanation is: Take a calendar, color in all of
04:41:53 8 the coincident return days -- "coincident" meaning
04:41:57 9 coincident with news -- and color in the two
04:42:02 10 following days.

04:42:05 11 It may be that in that process of
04:42:08 12 coloring some cells get colored more than once.
04:42:13 13 They get colored because of a preceding coincident
04:42:18 14 day and they also overlap with another coincident
04:42:21 15 day. But ignore the fact that you've
04:42:26 16 double-colored some days. They're still -- if the
04:42:27 17 color is blue, they're still blue.

04:42:29 18 Now, invest \$1 -- now that we've
04:42:33 19 got that part laid out on the calendar, invest \$1
04:42:38 20 at the closing price of midnight of the day before
04:42:46 21 the first blue streak on the calendar and hold
04:42:49 22 that investment until the end of that blue streak.
04:42:54 23 Whether it's three days later or five days later,
04:42:59 24 whenever that blue streak ends, hold that \$1.

04:43:03 25 Cash-out at the -- so you're

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04:43:05 1 starting at midnight, universal time, on the day
04:43:12 2 before the first blue color day, and you are
04:43:15 3 cashing out at the price of midnight of the last
04:43:19 4 day colored in blue. Take those proceeds and
04:43:26 5 reinvest at the beginning midnight of the day
04:43:28 6 before the beginning of the next blue streak on
04:43:31 7 the calendar. And hold until that blue streak
04:43:35 8 ends. Cash-out at midnight. Take those proceeds
04:43:41 9 and reinvest until you run -- continue that
04:43:43 10 process until you run out of blue streaks.

04:43:45 11 So this is assuming that you really
04:43:49 12 can -- it's a hypothetical in that it assumes that
04:43:54 13 you can -- you can actually execute your
04:43:57 14 transaction at the recorded closing price of both
04:44:04 15 the day before you invest and the last day of your
04:44:06 16 investment. That's exactly how you'd calculate
04:44:09 17 the \$1.99 or the 2.1 -- the 4.199 million.

04:44:20 18 Q. And is that the methodology that
04:44:22 19 you set forth in Footnote 20 of your report?

04:44:27 20 A. Yes. Footnote 20 doesn't provide
04:44:41 21 all of the detail that I just did about how to
04:44:44 22 handle overlaps. But in substance, that is what
04:44:50 23 Footnote 20 was meant to convey.

04:44:52 24 Q. Is there any part of your report
04:44:54 25 that addresses your methodology when overlaps, as

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04:44:58 1 you just described, occur?

04:45:00 2 A. The answer is certainly yes,
04:45:12 3 although I don't know without paging through the
04:45:16 4 report whether it's visible on the face of the
04:45:24 5 report. But what I mean by that "yes" is that, as
04:45:27 6 I testified earlier, I provided electronic
04:45:31 7 supporting materials for all of these
04:45:34 8 calculations; and in my view, the electronic
04:45:37 9 supporting materials produced along with the
04:45:41 10 report are part of the report.

04:45:43 11 So far better and far more precise
04:45:48 12 than a verbal description is the fact that the
04:45:52 13 actual calculation including the computer code
04:45:56 14 that performs the calculation are part of what I
04:45:59 15 produced in this case.

04:46:02 16 Q. Was there ever any overlap in
04:46:05 17 three-day windows where one window contained a
04:46:08 18 news day with regular returns and one window
04:46:11 19 contained a no-news day with unusual returns?

04:46:14 20 A. There were some mixed overlaps of
04:46:21 21 that kind which required that I define a way of
04:46:37 22 breaking the tie between -- in a mixed overlap of
04:46:42 23 that kind.

04:46:43 24 In other words, would I include the
04:46:49 25 day in -- would I label it -- would I tag it as

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04:46:56 1 a -- the extended -- with it falling within the
04:47:04 2 extended span of a coincident unusual return day
04:47:07 3 or something else.

04:47:10 4 And the answer is -- well, there is
04:47:18 5 an answer. And there were such days and there is
04:47:21 6 an answer to what I did.

04:47:23 7 Q. And is that answer set forth in the
04:47:28 8 face of your expert report, or in your backup
04:47:32 9 materials, or elsewhere?

04:47:33 10 A. It is certainly set forth in my
04:47:39 11 backup materials. I do not recall whether I make
04:47:42 12 reference to that complication in the body of the
04:47:46 13 report.

04:48:04 14 Q. Okay. Let's take a look
04:48:06 15 at -- handing you LM-4, which is just an enlarged
04:48:11 16 copy of your Table 3 in your report.

04:48:14 17 (Exhibit LM-4, Enlarged copy of
04:48:14 18 Table 3 from M. Laurentius Marais' expert
04:48:14 19 report, marked for identification, as of
04:48:24 20 this date.)

04:48:24 21 Q. In your Table 3, Dr. Marais, are
04:48:30 22 the values displayed calculated using actual XRP
04:48:37 23 daily returns?

04:48:39 24 A. In mathematical substance, yes. I
04:48:51 25 don't recall whether they are actually calculated

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04:48:54 1 in terms of recorded prices on -- at discrete
04:49:06 2 end-points. The same calculation could be
04:49:09 3 performed with returns by adding up -- by summing
04:49:10 4 log returns and taking the exponential function or
04:49:14 5 simply taking the ratio of prices at discrete
04:49:20 6 days. And I could tell with a code in front of,
04:49:24 7 me but I don't recall offhand.

04:49:26 8 What I'm explaining here is that
04:49:28 9 the mathematical -- the same mathematical
04:49:34 10 calculation can be performed via different
04:49:36 11 pathways. And I don't recall whether the express
04:49:39 12 pathway expressly used daily XRP returns or
04:49:45 13 whether it jumped to without going via -- without
04:49:51 14 involving returns.

04:49:54 15 Q. The numbers that are displayed in
04:50:04 16 Table 3 of your report are rounded. Correct?

04:50:06 17 A. Well, yes.

04:50:08 18 Q. If I were to examine your backup
04:50:12 19 materials and click on the Excel spreadsheet that
04:50:14 20 you produced for Table 3, I would see digits up to
04:50:18 21 several places. Correct?

04:50:20 22 A. If you clicked -- if you
04:50:25 23 interrogated my backup materials at the
04:50:28 24 appropriate point in the chain of calculation, you
04:50:34 25 would -- you could certainly achieve the result --

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04:50:38 1 get the information you are asking about.

04:50:40 2 What I don't know anymore as I sit
04:50:48 3 here, whether that point extends all the way down
04:50:51 4 to the Excel tables or whether the information was
04:50:53 5 rounded by the time it reached the Excel tables.

04:50:57 6 But if that turns out to be the
04:50:59 7 case, then going upstream in the materials that I
04:51:04 8 have produced would allow you to get the full
04:51:12 9 precision of the number. So they are there. I
04:51:14 10 just am not testifying that they are in the Excel
04:51:17 11 spreadsheet, although they may be.

04:51:19 12 Q. Understood. Okay. For -- looking
04:51:22 13 at Table 3 for the Model 5 row, the entry under
04:51:33 14 "'unusual' trading days coincident with Ripple
04:51:34 15 news" is \$1.99.

04:51:37 16 Do you see that?

04:51:37 17 A. Yes, I do.

04:51:38 18 Q. And is that the total accumulated
04:51:41 19 proceeds for the four Ripple key milestone news
04:51:45 20 unusual return days that you reference in
04:51:49 21 paragraph 21 of your report?

04:51:57 22 A. Yes. The \$1.99 from paragraph 21
04:52:01 23 is the same as the \$1.99 that I think you are
04:52:06 24 directing my attention to.

04:52:08 25 Q. Okay. For the Model 5 row in

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04:52:15 1 Table 3, is the \$4,198,673 figure under
04:52:21 2 no-coincident Ripple news the total accumulated
04:52:26 3 proceeds for the 179 Ripple news -- no Ripple
04:52:33 4 news -- strike that.

04:52:33 5 It's important to get this right.

04:52:34 6 For the Model 5 row of your
04:52:39 7 Table 3, is the \$4,198,673 figure under
04:52:47 8 no-coincident Ripple news the total accumulated
04:52:53 9 proceeds for the 179 no-news unusual return days
04:52:57 10 that is referenced in your paragraph 21?

04:53:04 11 A. Yes.

04:53:04 12 Q. Okay. If I -- looking at Table 3
04:53:07 13 again. If I multiply the \$1.99 in the unusual
04:53:13 14 trading days coincident with Ripple news column
04:53:19 15 with the approximately 4.2 million in the unusual
04:53:24 16 trading days no-coincident Ripple news column,
04:53:30 17 will I get, at least in rough terms, the
04:53:32 18 approximately 8.3 million figure in the unusual
04:53:36 19 trading days in [REDACTED] analysis period, third
04:53:42 20 column in Table 3?

04:53:47 21 A. With your qualification of "at
04:53:52 22 least in rough terms," which I take to mean
04:53:56 23 approximately in the same ballpark, you will get a
04:53:59 24 number that is close but not mathematically -- I
04:54:06 25 actually don't know about the particular case of

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04:54:10 1 Model 5.

04:54:11 2 But there are some instances where
04:54:13 3 that multiplication will not get you an exact, a
04:54:17 4 mathematically exact reconciliation for reasons
04:54:23 5 that have to do with testimony I've already given.

04:54:27 6 Q. Okay. And setting aside the issue
04:54:30 7 of whether or not there's an exact mathematical
04:54:34 8 reconciliation. What's the principle behind the
04:54:42 9 phenomenon that if you multiply the \$1.99 for the
04:54:50 10 unusual trading days coincident with Ripple news
04:54:53 11 with the approximately 4.2 million for the unusual
04:54:56 12 trading days no-coincident Ripple news, you will
04:54:58 13 get approximately the 8.3 million and the unusual
04:55:01 14 trading days in [REDACTED] analysis period?

04:55:06 15 MR. FIGEL: Objection.

04:55:06 16 A. Well, the principle behind that is
04:55:10 17 the principle of commutativity of multiplication.

04:55:19 18 Q. Okay. And how does that principle
04:55:22 19 apply to multiplying together the coincident with
04:55:27 20 Ripple news unusual trading day returns and the
04:55:31 21 no-coincident Ripple news unusual trading day
04:55:36 22 returns to get the total unusual trading days in
04:55:38 23 [REDACTED] analysis period figure?

04:55:40 24 A. In the following way: The -- one
04:55:49 25 can take that same calendar with the blue streaks

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04:55:53 1 that I referred to earlier and write into every
04:56:02 2 cell of that hypothetical calendar, hanging in
04:56:03 3 midair here between us, the total return for that
04:56:07 4 day of un-Ripple.

04:56:14 5 Now, things get a little bit
04:56:16 6 complicated because what I -- because of the
04:56:22 7 overlapping of the streaks and the fact that you
04:56:29 8 have already asked me about that, there is more
04:56:31 9 than one classification of the kinds of days that
04:56:34 10 we are talking about here.

04:56:38 11 So now we have to have in mind that
04:56:42 12 there are red -- there are blue streaks but also
04:56:45 13 yellow streaks and green streaks and there may
04:56:47 14 be -- those streaks may collide. And to make an
04:56:52 15 overall coherent table, I had to impose some
04:56:59 16 priority rules on what do I do in the cases where
04:57:01 17 the streaks overlap to some extent.

04:57:11 18 But for answering your pending
04:57:15 19 question, I'm going to assume away that
04:57:17 20 complication, so there are no overlaps to be
04:57:18 21 concerned about. And there's only one color
04:57:21 22 involved here.

04:57:27 23 Well, one way of describing the
04:57:29 24 calculation of the -- that we're talking about
04:57:33 25 here is to start at the far left-hand end of the

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04:57:37 1 blue streaks with \$1 and to multiply it by the
04:57:47 2 total return -- one -- 100 percent, plus the total
04:57:50 3 return for that first day, and then multiply the
04:57:53 4 result of that by 100 percent, plus the total
04:57:56 5 return for the second color of the streaked -- the
04:57:58 6 "streaky" day, and so on.

04:58:01 7 And then skip to the next
04:58:04 8 place -- over the white space, to the next space
04:58:07 9 where a blue streak has been colored in on this
04:58:10 10 chart.

04:58:10 11 Now some of those event days are --
04:58:14 12 some of those blue streaky days are of the
04:58:18 13 coincident kind, and -- but we are now talking
04:58:22 14 about combining them with the not-coincident kind.
04:58:26 15 And so I've added in some more blue streaks for
04:58:30 16 the not-coincident kind.

04:58:34 17 Now the commutative law of
04:58:35 18 multiplication says that if I do a whole bunch of
04:58:39 19 multiplications, it doesn't really matter whether
04:58:43 20 I multiply the second or the third things first
04:58:47 21 and then multiply by the first, the order of the
04:58:51 22 multiplications doesn't matter.

04:58:53 23 And since the total return over
04:58:55 24 unusual trading days is simply the
04:59:03 25 multi- -- consists of the multiplication of all of

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04:59:06 1 the days that I have colored in blue, and the two
04:59:13 2 components that are reported separately under the
04:59:16 3 milestones day is simply the multiplication of
04:59:21 4 some of them, those are the coincident ones.

04:59:25 5 And the no confounding Ripple news
04:59:30 6 are -- represents the multiplication of others of
04:59:33 7 them. It's easy to see that if I multiply all of
04:59:37 8 them together, I must get the result from
04:59:39 9 multiplying them together in groups.

04:59:41 10 So that is why my testimony was
04:59:43 11 that the -- yes, there is a principle behind it,
04:59:46 12 and it is the principle of the commutativity of
04:59:50 13 multiplication, the commutative law.

04:59:54 14 Q. Thank you, Doctor. For -- going
04:59:56 15 back to your Table 3, for the Model 5 row, what
05:00:05 16 does the entry for -- of \$1.03 under the regular
05:00:13 17 trading days heading for key milestones reflect?

05:00:27 18 A. That over all of the regular
05:00:31 19 trading days that -- so those are trading days
05:00:37 20 that are not individually labeled as unusual and
05:00:51 21 that do not coincide with news. Let me see.

05:00:58 22 So if you refer back to Table 2,
05:01:07 23 and you look in the same spot, you would see that
05:01:09 24 there is a count of one.

05:01:13 25 Q. Yes.

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05:01:13 1 A. And this \$1.03 is really just what
05:01:18 2 the proceeds of trading over a three-day -- for
05:01:29 3 consistency, over a three-day window holding a \$1
05:01:34 4 investment starting on that one day. So no
05:01:38 5 multiplication is involved.

05:01:39 6 Q. And the regular trading days column
05:01:42 7 on both your Table 2 and your Table 3 corresponds
05:01:45 8 to days in which there was a Ripple news event but
05:01:50 9 there was not an unusual daily XRP return. Is
05:01:54 10 that right?

05:01:54 11 A. Correct.

05:01:55 12 Q. Okay. If I wanted to know -- going
05:02:01 13 back to Table 3, if I wanted to know the total
05:02:04 14 cumulative proceeds for the five days of Ripple
05:02:08 15 news events in the key milestones data set, would
05:02:11 16 I multiply \$1.99 and \$1.03?

05:02:17 17 A. Yes. Subject only to the
05:02:30 18 complications about which I have already testified
05:02:33 19 about the possibility of overlapping streaks and
05:02:41 20 how those are dealt with and my testimony about
05:02:45 21 how one -- about what I had to do to make for an
05:02:50 22 overall coherence and how that can be found in
05:02:56 23 precise detail in my backup materials.

05:03:04 24 Q. Okay. The product of \$1.99 and
05:03:06 25 \$1.03 is approximately \$2.05. Correct?

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05:03:10 1 A. That seems about right.

05:03:16 2 Q. Okay. And what is the -- strike
05:03:16 3 that.

05:03:34 4 Okay. Returning to Table 3 of your
05:03:36 5 report, again, sticking with Model number 5, is
05:03:42 6 the \$92.55 figure the total compounded proceeds
05:03:46 7 for all trading days in the [REDACTED] analysis period
05:03:53 8 for Dr. [REDACTED] Model Number 5?

05:03:55 9 MR. FIGEL: Objection.

05:03:56 10 A. Yes.

05:03:56 11 Q. Okay. Now, I'm going to move to
05:03:58 12 the right-hand side of Table 3 and look at the
05:03:58 13 [REDACTED] select categories columns.

05:04:05 14 Is \$482.20 the total compounded
05:04:09 15 proceeds for unusual trading days coincident with
05:04:13 16 Ripple news in Dr. [REDACTED] Model 5?

05:04:16 17 A. Yes.

05:04:17 18 Q. And is \$7,776 the total compounded
05:04:17 19 proceeds for unusual trading days not coincident
05:04:17 20 with Ripple news in Dr. [REDACTED] Model 5?

05:04:17 21 A. Yes.

05:04:31 22 Q. Okay. Now, I'm going to look at
05:04:33 23 Tables 2 and 3 together. Is the \$482.20 figure in
05:04:39 24 Table 3 the total compounded proceeds for the 24
05:04:44 25 days of unusual returns coincident with Ripple

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05:04:46 1 news displayed in Table 2?

05:04:49 2 A. Yes. Subject to all of the minor
05:04:54 3 complications that I testified about earlier in
05:05:02 4 response to questions from you.

05:05:03 5 Q. Setting aside those same minor
05:05:08 6 complications, is the \$7776 figure in Table 3 the
05:05:12 7 total compounded proceeds for the 159 unusual
05:05:16 8 trading days no-coincident Ripple news displayed
05:05:21 9 in Table 2?

05:05:22 10 A. Yes.

05:05:22 11 Q. Okay. If we compare all 24 Ripple
05:05:33 12 news events unusual return days within the Model 5
05:05:38 13 trading period -- strike that.

05:06:14 14 Okay. Going back to Table 3. The
05:06:17 15 unusual trading days in Dr. [REDACTED] analysis period
05:06:20 16 for Model 5 is the approximately \$8.3 million
05:06:25 17 figure. Right?

05:06:27 18 A. Yes.

05:06:35 19 Q. And is that approximately
05:06:38 20 \$8.3 million figure the total compounded proceeds
05:06:41 21 for all unusual return days in Model 5?

05:06:44 22 A. Yes. Again, subject to everything
05:06:47 23 I've testified about here. With details that can
05:06:53 24 be found in my electronic backup materials.

05:06:56 25 Q. Okay. Okay. Going back to the

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05:07:12 1 Ripple news days within Model 5, is it fair to say
05:07:16 2 that if one undertook an investment strategy where
05:07:20 3 \$1 is invested in all five of the key milestone
05:07:24 4 news days plus the two days as described in your
05:07:29 5 Footnote 20, the proceeds would be an accumulated
05:07:34 6 total value of \$2.05?

05:07:37 7 A. Something close to that. I don't
05:07:41 8 know whether this is one of the instances where a
05:07:44 9 simple multiplication yields exactly the right
05:07:48 10 number. I've -- for reasons I've already
05:07:52 11 testified about.

05:07:53 12 Q. Okay. And looking now at Tables 2
05:07:55 13 and 3 together, would you agree that the total
05:08:00 14 compounded proceeds for all trading days in [REDACTED]
05:08:04 15 analysis period is \$92.55?

05:08:13 16 A. I'm sorry. Looking at both tables
05:08:16 17 together --

05:08:17 18 Q. Yeah. Strike that. Let me ask
05:08:20 19 another question.

05:08:21 20 A. You're asking me about a dollar
05:08:24 21 figure which only appears in one.

05:08:26 22 Q. You're right. Let me not do that.
05:08:28 23 Withdrawn.

05:08:28 24 Does the \$92.55 figure displayed in
05:08:33 25 all trading days in [REDACTED] analysis period

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05:08:36 1 correspond with the 2,007 all trading days in
05:08:40 2 analysis period identified in Table 2?

05:08:42 3 A. Yes.

05:08:48 4 Q. Okay. So it's fair to say that we
05:08:51 5 know that the total compounded proceeds for all
05:08:52 6 2,007 days in [REDACTED] Model 5 is \$92.55?

05:08:57 7 A. That's what this number means.

05:08:59 8 Q. Okay. And we know that the total
05:09:01 9 compounded proceeds for the five Ripple news days
05:09:05 10 in the [REDACTED] Model Number 5 is \$2.05
05:09:10 11 approximately?

05:09:10 12 A. Again -- again, that is correct.

05:09:11 13 Q. So if we wanted to determine the
05:09:13 14 compounded total proceeds for the remaining 2,002
05:09:18 15 days in Dr. [REDACTED] Model Number 5, we can divide
05:09:24 16 92.55 by 205. Is that right?

05:09:30 17 A. I have to think about that.

05:09:33 18 Q. Okay.

05:09:47 19 A. Yes. The compounded return over
05:09:51 20 the five days alone is \$2.05. And over the entire
05:09:58 21 period, all 2,007 is 92.55. And those should --
05:10:04 22 subject to the same complications that I described
05:10:06 23 earlier, those should multiply.

05:10:13 24 Q. The \$2.05 for the five days should
05:10:16 25 multiply by some number assigned to the 2,002 days

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05:10:25 1 to get us the total 92.55 for the 2,007 days. Is
05:10:26 2 that right?

05:10:26 3 A. Yes. I hesitate just in case there
05:10:28 4 is some complication arising from different
05:10:31 5 numbers of total days in these calculations, but I
05:10:39 6 -- as I sit here, I can't think of a reason why
05:10:42 7 the days covered in the various columns here would
05:10:45 8 change from group to group.

05:10:48 9 Q. Okay. And if we divide \$92.55 by
05:10:52 10 \$2.05 to try to reach an approximation for the
05:10:58 11 cumulative total proceeds for the 2,002 days,
05:11:01 12 that's approximately \$45.06. Is that right?

05:11:08 13 A. That seems about right.

05:11:10 14 Q. Okay. So is it fair to say that if
05:11:10 15 one undertook an investment strategy where \$1 is
05:11:14 16 invested on all of the 2,002 no Ripple news days
05:11:20 17 plus the additional days described in your
05:11:24 18 methodology in Footnote 20, the proceeds of that
05:11:28 19 investment strategy would be an accumulated total
05:11:31 20 value of \$45.06 approximately?

05:11:37 21 A. I'm sorry. The -- I need to hear
05:11:41 22 the premise of the question again. I heard the
05:11:43 23 trailing end, but what is the premise again?

05:11:45 24 Q. Sure. So the premise is someone is
05:11:48 25 undertaking an investment strategy where they

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05:11:50 1 invest \$1 on the 2,002 no Ripple news days in
05:11:58 2 [REDACTED] Model 5.

05:11:59 3 And my question is: Is the
05:12:03 4 cumulative proceeds of that strategy approximately
05:12:10 5 \$45.06?

05:12:10 6 A. Yes. With -- that sounds right
05:12:11 7 with one adjustment to the series of questions to
05:12:18 8 which -- of which this is a part. There was a
05:12:26 9 point in which you mentioned 2,002 days.

05:12:26 10 Q. Yes.

05:12:30 11 A. Recall that the returns that I am
05:12:32 12 measuring here are measured over three-day
05:12:43 13 periods. That is -- I explained that in part
05:12:47 14 using the concept of the blue streaks drawn onto
05:12:50 15 the calendar. I think you got to 2,002 by
05:12:53 16 subtracting five from 2,007.

05:12:58 17 The \$90 that we are seeing on row
05:13:04 18 five is for the entire run of the calendar, and
05:13:10 19 the \$2.05 that you have calculated and that I've
05:13:17 20 broadly agreed to is for five days.

05:13:23 21 But each of those five days, if
05:13:25 22 they're widely separated so that there are no
05:13:28 23 overlaps, each of those five days could account
05:13:32 24 for three trading days because of the way this
05:13:36 25 calculation is performed.

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05:13:38 1 So what I won't agree to -- or
05:13:41 2 can't agree to -- is that it's, in fact, exactly
05:13:47 3 2,002 trading days because there are complications
05:13:51 4 resulting from the extent of the blue streaks.

05:13:57 5 Q. I see. So would it be fair to say
05:14:00 6 that the proceeds for -- the cumulative total
05:14:11 7 proceeds for the days coded as no news days within
05:14:17 8 the 2,007 is approximately \$45.06?

05:14:23 9 MR. FIGEL: Objection.

05:14:23 10 A. That's -- that is a -- that seems
05:14:27 11 to me to be fair.

05:14:28 12 Q. Okay.

05:14:31 13 A. When -- when it works for you,
05:14:34 14 could we take another break? It's getting late
05:14:37 15 and I need to get some blood flow.

05:14:40 16 MR. SYLVESTER: Sure. We can take
05:14:41 17 a quick break. Thanks. Off the record.

05:14:46 18 THE VIDEOGRAPHER: The time is
05:14:46 19 5:13 p.m. This concludes Media 5. Off the
05:14:46 20 record.

05:37:02 21 (Recess taken from 5:14 p.m. to
05:37:02 22 5:35 p.m.)

05:37:02 23 THE VIDEOGRAPHER: The time is 5:35
05:37:02 24 p.m. This begins Media 6. On the record.

05:37:02 25 BY MR. SYLVESTER:

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05:37:18 1 Q. Okay. Now, Dr. Marais, turning to
05:37:19 2 Table 3, I believe that you testified earlier that
05:37:25 3 in applying your methodology for calculating the
05:37:28 4 cumulative proceeds, you applied a method such
05:36:32 5 that a single day would not be counted in both the
05:36:35 6 unusual trading days coincident with Ripple news
05:36:38 7 column and also the unusual trading days
05:36:43 8 no-coincident Ripple news column. Is that right?

05:36:46 9 A. Yes.

05:36:47 10 Q. Okay. Is it also true that you
05:36:48 11 applied a methodology such that if a day were
05:36:50 12 counted in the regular trading day's column, it
05:36:55 13 was then not counted in either of the two unusual
05:36:58 14 trading days columns?

05:37:00 15 A. Yes.

05:37:11 16 Q. Okay. I would like to show you
05:37:13 17 what I have marked LM-5.

05:37:15 18 (Exhibit LM-5, Summary table of
05:37:15 19 data provided by M. Laurentius Marais,
05:37:15 20 marked for identification, as of this
05:37:18 21 date.)

05:37:18 22 Q. LM-5 is a summary table of data
05:37:21 23 that you provided displaying many of the numbers
05:37:23 24 that we were just discussing before the break.
05:37:28 25 And it's formatted in the same format as the

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05:37:30 1 Table 1 of your report, which is to say that the
05:37:35 2 columns are cumulative XRP return and categorized
05:37:40 3 in unusual daily XRP return days and regular XRP
05:37:48 4 return days.

05:37:49 5 And the news events are categorized
05:37:51 6 by milestones again into, yes, there was a Ripple
05:37:55 7 milestone news day or, no, there was not a Ripple
05:37:59 8 milestones news day.

05:38:03 9 But instead of the number of days,
05:38:04 10 what I've inserted into this chart is largely
05:38:08 11 numbers drawn from your Table 3. So if we start
05:38:11 12 at the top-left cell of LM-5, you'll see \$1.99.
05:38:18 13 And \$1.99 is the cumulative return for the four
05:38:22 14 unusual return days with Ripple milestone news
05:38:33 15 according to your Table 3. Correct?

05:38:33 16 A. Yes.

05:38:33 17 Q. Okay. And the top middle cell is
05:38:34 18 \$1.03. And \$1.03 is the total cumulative return
05:38:38 19 for the one regular return day with Ripple
05:38:41 20 milestone news according to your Table 3.
05:38:50 21 Correct?

05:38:50 22 A. That's correct. As you indicated
05:38:52 23 yourself, a rounded number, but --

05:38:56 24 Q. Approximately.

05:38:57 25 A. -- yes, that is the number that is

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05:39:01 1 reported in my Table 3.

05:39:02 2 Q. Okay. And turning to the middle
05:39:04 3 left cell, 4,198,673 is the cumulative return for
05:39:12 4 the 179 unusual return days with no Ripple news in
05:39:19 5 [REDACTED] Model Number 5. Correct?

05:39:23 6 A. I'm just checking that out.

05:39:25 7 Q. Yes.

05:39:26 8 A. 673 unusual trading days, key
05:39:40 9 milestone. Yes, that -- that is correct.

05:39:44 10 Q. Okay. The bottom left cell is
05:39:50 11 labeled "all." And you can see it's 8,352,186.
05:39:57 12 And that is the total cumulative return for all
05:40:05 13 183 unusual return days in [REDACTED] Model Number 5.
05:40:09 14 Correct?

05:40:09 15 A. Yes.

05:40:10 16 Q. Okay. Now, moving to the
05:40:14 17 right-most cells on LM-5, \$2.05 is the approximate
05:40:23 18 total cumulative return for all five Ripple
05:40:29 19 milestone news days in Dr. [REDACTED] Model Number 5.
05:40:32 20 Correct?

05:40:32 21 A. That's correct.

05:40:33 22 Q. Okay. And the bottom-right cell,
05:40:37 23 the \$92.55, that's the total cumulative return for
05:40:41 24 the entire period in [REDACTED] Model Number 5.
05:40:52 25 Correct?

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05:40:52 1 A. Yes.

05:40:52 2 Q. Okay. And before the break, we
05:40:54 3 determined that the total return for all trading
05:41:00 4 days in [REDACTED] Model Number 5 period, taking out
05:41:05 5 the days associated with the five Ripple milestone
05:41:12 6 days, is approximately \$45.06. Is that correct?

05:41:18 7 A. Correct.

05:41:19 8 Q. Okay. Looking at this table, is it
05:41:30 9 correct that to reach the missing values that we
05:41:32 10 haven't discussed, the way you would fill in those
05:41:34 11 numbers is to reach the total that's in the "all"
05:41:36 12 column, you would multiply across the rows.

05:41:39 13 So for instance, for the yes news
05:41:41 14 event it's \$1.99 times \$1.03 equals approximately
05:41:53 15 \$2.05?

05:41:54 16 A. Oh, yes. Yes.

05:41:54 17 Q. Okay. And then when you're
05:41:55 18 examining just no-news event days, to reach the
05:41:59 19 \$45.06 in the "all" column, you would have to
05:42:03 20 multiply the approximately 4.1 million times a
05:42:05 21 very small number. Is that right?

05:42:07 22 A. Right. The \$45.06 itself comes
05:42:12 23 from -- I mean, I see a \$45.06 there, but ...

05:42:16 24 Q. That was if we wanted to determine
05:42:18 25 the compounded total proceeds for the remaining

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05:42:25 1 days in [REDACTED] Model Number 5. I initially had
05:42:32 2 called that 2,002, but you pointed out that you
05:42:32 3 can't really just take 2,007 minus five.

05:42:35 4 A. Mm-hmm.

05:42:35 5 Q. So I think we'd agreed before the
05:42:37 6 break that one way to put it is that if you take
05:42:39 7 the total 2,007 [REDACTED] Model 5 trading day period
05:42:43 8 and you subtract out the returns associated with
05:42:46 9 the Ripple key milestone days, the way to reach
05:42:50 10 that is to divide the total returns for the entire
05:42:55 11 period on all days, \$92.55, by the returns
05:43:03 12 associated with the yes Ripple milestones days
05:43:06 13 which is \$2.05.

05:43:09 14 Is that right?

05:43:09 15 A. Yes. I testified that you could do
05:43:13 16 that calculation, but it would be subject to the
05:43:16 17 various qualifications in my prior testimony and
05:43:25 18 -- which may be -- have unusual mag- -- relative
05:43:30 19 magnitudes because of the small number of news
05:43:33 20 days we're talking about here.

05:43:35 21 Q. When you say --

05:43:36 22 A. But broadly -- broadly, that is
05:43:39 23 what I testified to.

05:43:40 24 Q. Okay. So if we look, Dr. Marais,
05:43:47 25 just at the "all" column in LM-5, is it fair to

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05:43:51 1 conclude that without the five days of cumulative
05:43:54 2 returns from days with Ripple key milestone
05:43:59 3 announcements, the total compounded proceeds for
05:44:02 4 the entire 2,007 day trading period are about cut
05:44:07 5 in half?

05:44:08 6 A. Subject to gain to the
05:44:10 7 qualifications in my previous testimony, I would
05:44:14 8 have to agree that dividing anything by two about
05:44:22 9 cuts it in half.

05:44:23 10 Q. Okay. All right. I'd like to show
05:44:32 11 you another exhibit. This one is labeled LM-6.

05:44:44 12 (Exhibit LM-6, Summary table
05:44:44 13 referencing data provided by M. Laurentius
05:44:44 14 Marais for the same 2,007 day trading
05:44:44 15 period in [REDACTED] Model Number 5, marked for
05:44:47 16 identification, as of this date.)

05:44:47 17 Q. So LM-6 is also a summary table
05:44:57 18 referencing data you provided. And this is for
05:44:59 19 the same 2,007 day trading period in [REDACTED] Model
05:45:04 20 Number 5. The difference is that this, instead of
05:45:07 21 the key milestone period, is the select event
05:45:09 22 period.

05:45:10 23 A. Got it.

05:45:11 24 Q. Okay. So looking at the numbers on
05:45:16 25 this table, is the \$482.20 in the top-left cell,

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05:45:26 1 is that the total compounded proceeds on unusual
05:45:31 2 return days coincident with Ripple news from your
05:45:34 3 Table 3?

05:45:41 4 A. That is the number from Table 3 for
05:45:48 5 Model 5.

05:45:49 6 Q. Okay. And just for the record, the
05:45:50 7 way this is displayed in LM-6 is that the \$482.20
05:45:56 8 is in the cell reflecting yes news event and
05:46:01 9 unusual return for daily XRP return.

05:46:07 10 All right. Looking at the top
05:46:12 11 middle cell, the 29 cents figure, is that the 29
05:46:20 12 cents figure that appears in the regular trading
05:46:27 13 days column for the select category in your
05:46:29 14 Table 3?

05:46:30 15 A. That is indeed that figure.

05:46:36 16 Q. Okay. And if we wanted to know
05:46:44 17 for -- I'm turning to the "all" category. If we
05:46:47 18 wanted to know the total cumulative proceeds for
05:46:51 19 all news event days, the way we would reach that
05:46:54 20 is we would multiply 482.20 by .29. Is that
05:46:54 21 right?

05:47:05 22 A. Yes. Subject to all of the
05:47:07 23 qualifications in my previous testimony on such
05:47:16 24 multiplications.

05:47:17 25 Q. And 48 -- sorry. Strike that.

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05:47:18 1 482.20 times .29 is approximately
05:47:29 2 139.95. Would you agree?

05:47:31 3 A. That's a level of precision and a
05:47:32 4 kind of mental arithmetic that I don't do anymore.
05:47:40 5 But it's certainly the ballpark -- the right
05:47:42 6 ballpark. It's about .3 times 480.

05:47:49 7 Q. Looking at the middle left cell in
05:47:51 8 LM-6, that 7,776, that corresponds with the
05:48:00 9 unusual trading days, no-coincident Ripple news in
05:48:06 10 your Table 3. Correct?

05:48:07 11 A. I'm sorry. It's the seven thousand
05:48:17 12 seven hundred and -- yes, I do see that number.

05:48:25 13 Q. Okay. And the bottom-right cell,
05:48:27 14 "all," "all," that's still \$92.55 because this is
05:48:32 15 the same total compounded proceeds figure for the
05:48:34 16 2,007 trading days. Correct?

05:48:36 17 A. Yes, that is correct.

05:48:37 18 Q. Okay. Now, if we want to get the
05:48:39 19 figure -- so we've established the 139.95 in
05:48:49 20 approximate terms. We've established the 92.55
05:48:52 21 from your chart. If we want to get the figure for
05:48:54 22 the cumulative returns for all no Ripple news
05:48:57 23 days, would we do that by dividing 92.55 by
05:49:06 24 139.95?

05:49:07 25 A. If there were no peculiarities that

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05:49:18 1 of the kind that I alluded to in my earlier
05:49:21 2 testimony, the qualifications about these
05:49:24 3 multiplications, that would be a way of getting a
05:49:27 4 number for that cell.

05:49:28 5 Q. And what -- just to make sure we're
05:49:31 6 on the same page, what peculiarities are you
05:49:36 7 referring to in your last answer?

05:49:44 8 A. I'm referring to the peculiarities
05:49:46 9 that arise from classifying potentially
05:49:54 10 indeterminate cells in my hypothetical image that
05:50:04 11 I drew in the air, as it were, of streaks of
05:50:07 12 different colors overlapping and making a
05:50:10 13 calculation involving or completing filling out a
05:50:20 14 table involving categories of events that might
05:50:22 15 have overlaps.

05:50:27 16 Q. Mm-hmm. Is it fair to say that
05:50:28 17 applying the sort of, methodological selections
05:50:33 18 you made in the event, that there were these
05:50:35 19 overlaps, the way you would reach the total
05:50:43 20 cumulative proceeds for no-news events in
05:50:47 21 Exhibit 6 would be to divide 92.55 by 139.95?

05:50:53 22 A. I'm sorry. Say -- say that again.
05:50:57 23 The --

05:50:57 24 Q. Sure. I want to -- I want to say,
05:50:59 25 like, assuming that we apply the methodological

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05:51:03 1 choices that you made with respect to overlapping
05:51:06 2 windows, taking those as a given, as a
05:51:08 3 construction of how to determine the returns, the
05:51:11 4 total cumulative proceeds associated with all of
05:51:15 5 the days in which there were no Ripple news
05:51:18 6 events, the way we would approach that is to
05:51:21 7 divide the returns for all trading days in the
05:51:25 8 period, 92.55, by the returns for the yes Ripple
05:51:31 9 news event trading days in the period, 139.95.

05:51:37 10 A. The -- your question refers to
05:51:47 11 my -- what I've -- the qualification that I've
05:51:54 12 been stating, and then appears to make an abrupt
05:51:59 13 U-turn and to simply ignore that qualification.

05:52:02 14 I have been -- I've consistently
05:52:06 15 testified that the multiplic- -- ones ability to
05:52:11 16 multiply numbers in tables like this is qualified
05:52:22 17 by, limited by anomalies that arise from the
05:52:28 18 classification -- the hierarchical classification
05:52:32 19 that I provided that I needed to implement. And
05:52:37 20 that does not yield perfect multiplications.

05:52:43 21 And then you -- your question
05:52:44 22 appears to recognize that and then to immediately
05:52:47 23 deny it. The -- one's ability -- the correctness
05:52:56 24 of multiplying cell entries in these tables to get
05:52:59 25 to the margins, so dividing the margins by cell

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05:53:01 1 entries to get other cell entries, is all limited
05:53:09 2 by the effect of the classifications I needed to
05:53:15 3 make and the fact that those classifications do
05:53:20 4 not affect different columns in this table in the
05:53:34 5 same way.

05:53:34 6 So the answer -- the long answer
05:53:40 7 I'm giving you here is really the same as the
05:53:43 8 answer I gave you -- I have just given you about
05:53:44 9 five times in a row. If those complications did
05:53:49 10 not exist then we could multiply and divide as you
05:53:51 11 suggest.

05:53:51 12 The complications do exist, and so
05:53:54 13 I have no reason to expect that you can replicate
05:53:56 14 calculations that can be done with the actual
05:53:58 15 returns by multiplying round and dividing rounded
05:54:07 16 numbers from my Table 3 in the format of tables
05:54:12 17 like the LM-6 and whatever the previous, LM-5.

05:54:19 18 Q. Turning to LM-6, I want to make
05:54:24 19 sure I understand your methodology with respect to
05:54:27 20 overlapping days.

05:54:29 21 The value represented, the
05:54:35 22 480 -- maybe it's easier to point to your chart,
05:54:37 23 to your Table 3. The \$482.20 that's reported as
05:54:43 24 coincident with Ripple news -- do you see that?

05:54:48 25 A. Yes.

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05:54:48 1 Q. Is it true that for that period,
05:54:55 2 whatever days make up the total proceeds of
05:54:58 3 \$482.20, none of those days overlap with either
05:55:03 4 the no-coincident Ripple news period or the
05:55:08 5 regular trading days period?

05:55:09 6 A. I'm not certain whether that is
05:55:11 7 true because of the way the hierarchy of rules
05:55:17 8 that I applied affects the calculation behind
05:55:21 9 different cells in this table. But the way to
05:55:24 10 know that is to look at the actual computer code
05:55:27 11 that created the actual calculations without
05:55:31 12 rounding and without truncation, and with no
05:55:34 13 ambiguity about potentially overlapping colored
05:55:40 14 streaks in the hypothetical calendar that I have
05:55:44 15 referred to.

05:55:48 16 Q. The methodology that you applied to
05:55:51 17 reach the figures in your Table 3 for \$482.20 for
05:56:01 18 unusual trading days coincident with Ripple news,
05:56:05 19 \$7,776 associated with -- or rather, cumulative
05:56:11 20 proceeds for unusual trading days no-coincident
05:56:14 21 Ripple news, do you believe that you applied that
05:56:16 22 correctly?

05:56:18 23 A. I do.

05:56:19 24 Q. Okay. And is the same true with
05:56:22 25 the methodology that you applied with respect to

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05:56:27 1 determining that 29 cents total cumulative
05:56:30 2 proceeds associated with the regular trading days
05:56:34 3 in your Table 3?

05:56:35 4 A. "The same" meaning I believe that I
05:56:45 5 applied the methodology that I applied correctly?

05:56:49 6 Q. I guess I'm asking more for your
05:56:52 7 own value judgment on your methodology. It seems
05:56:56 8 that you are confronted with a situation where you
05:57:00 9 had overlapping windows between several
05:57:06 10 categories. Is that fair?

05:57:07 11 A. That is fair.

05:57:08 12 Q. And you also decided that the right
05:57:11 13 thing to do was to implement a strategy so that
05:57:14 14 you didn't double count any day in any of those
05:57:17 15 categories, notwithstanding the overlapping
05:57:20 16 windows.

05:57:20 17 A. That was my intention.

05:57:21 18 Q. And is that -- do you think that
05:57:25 19 was the appropriate methodology to apply to this
05:57:28 20 exercise set forth in Table 3?

05:57:30 21 A. I think that there is no -- because
05:57:33 22 of the nature of the data and the nature of the
05:57:36 23 issue that we're discussing, I think that there is
05:57:40 24 no uniquely correct way of dealing with the issue.

05:57:46 25 But I believe that what I -- I

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05:57:50 1 certainly think that what I applied, the method
05:57:55 2 that I did apply and the hierarchy of
05:57:59 3 classification that I did apply was an entirely
05:58:02 4 reasonable and appropriate method for illustrating
05:58:06 5 the point that I am -- that I intended to
05:58:10 6 illustrate.

05:58:11 7 Q. So given your familiarity with your
05:58:23 8 data and your methodology, sitting here today, if
05:58:26 9 you look at LM-6, are these returns for, say, the
05:58:29 10 news event yes category of 139.95 in the ballpark
05:58:36 11 of what you'd expect?

05:58:41 12 A. I have no particular expectation.
05:58:45 13 I don't have a preformed expectation. If I were
05:58:49 14 attempting to make tables like LM-5 and LM-6
05:58:58 15 entirely consistently with my previous testimony,
05:59:00 16 I would not be attempting to multiply and divide
05:59:05 17 numbers from Table 3 of my report.

05:59:05 18 I would turn instead to the
05:59:08 19 electronic supporting materials for my report,
05:59:11 20 which not only set forth the full precision
05:59:14 21 numbers so that they're not subject to rounding,
05:59:16 22 but also reveal exactly what was multiplied to get
05:59:20 23 to the dollar figure reported in a truncated or a
05:59:27 24 rounded form in each cell of Table 3.

05:59:30 25 So if I had an interest in

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05:59:35 1 calculating, in filling in a table like Table LM-6
05:59:39 2 or Table LM-7, I've just described the method that
05:59:45 3 I would follow which is not the method --
05:59:51 4 certainly not relying on somebody else's
05:59:54 5 arithmetic and isn't even based on starting from
05:59:58 6 the numbers that are reported on the visible face
06:00:01 7 of Table 3.

06:00:05 8 Q. You would not start with such
06:00:07 9 numbers?

06:00:12 10 MR. FIGEL: Objection.

06:00:13 11 Q. I wanted to make sure I heard you
06:00:15 12 correctly.

06:00:16 13 A. For filling in the cells of tables
06:00:19 14 like LM-6 and LM-5, I would not start with the
06:00:28 15 rounded numbers that I have just -- as I just
06:00:31 16 explained.

06:00:31 17 I would go to the source material
06:00:34 18 for Table 3 where I would have the benefit of full
06:00:40 19 precision and full understanding of how potential
06:00:45 20 overlaps had been dealt with.

06:00:46 21 Q. If you had the -- your Table 3
06:00:51 22 Excel spreadsheet in front of you, and you wanted
06:00:57 23 to undertake the exercise set forth in the yes
06:01:00 24 news event row in LM-6, would you do that by
06:01:06 25 multiplying the cell that corresponds with \$482.20

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06:01:13 1 on LM-4 with the cell that corresponds with 29
06:01:19 2 cents on LM-4?

06:01:22 3 A. No.

06:01:29 4 Q. Why not?

06:01:29 5 A. Because, first, as I've testified
06:01:31 6 already, I do not know, sitting here, whether
06:01:36 7 there is a level of rounding that occurred before
06:01:39 8 the numbers got into the spreadsheets like the one
06:01:42 9 that created Table 3.

06:01:44 10 You may recall that I explained
06:01:48 11 that I would go upstream from that table as far as
06:01:51 12 was necessary to get full precision.

06:02:00 13 But I would also, in order to avoid
06:02:03 14 any possibility of misunderstanding due to
06:02:08 15 overlapping cell products, I would go upstream far
06:02:16 16 enough not only to get the full precision, but
06:02:21 17 upstream far enough to be completely clear about
06:02:29 18 what were the -- which cells in the hypothetical
06:02:34 19 calendar that I have referred to a number of
06:02:38 20 times, contributed to each of the products
06:02:49 21 reported in Table 3, in order to understand
06:02:54 22 whether I should expect a multiplicative
06:02:56 23 relationship like the ones in Tables LM-5 and
06:03:01 24 LM-6, and if not, to apply suitable footnotes to
06:03:08 25 account for whatever it was that I discovered.

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06:03:13 1 Q. If one wanted to undertake the
06:03:16 2 exercise that you just described, could one do so
06:03:18 3 with the data that you supplied in Marais backup?

06:03:23 4 A. Yes. That's -- in fact, those
06:03:29 5 materials are exactly what I have meant to refer
06:03:31 6 to -- what I did -- was, in fact referring to as
06:03:34 7 my electronic backup for every -- in every answer
06:03:41 8 in the past ten minutes or so.

06:03:48 9 Q. When you undertook your assignment
06:03:50 10 in this case, did you investigate to what
06:03:55 11 extent -- strike that.

06:03:55 12 Let's assume, as a hypothetical,
06:03:58 13 that the numbers on LM-6 are roughly correct.

06:04:02 14 Would it change your opinion at all
06:04:05 15 with respect to your rebuttal of Dr. [REDACTED] report
06:04:19 16 in this case, if, in fact, Ripple news events were
06:04:22 17 responsible for returns of 139.95 and all news
06:04:26 18 events were 92.55?

06:04:27 19 MR. FIGEL: Objection.

06:04:28 20 A. I would turn instead to Table 3 and
06:04:36 21 assume that the numbers on Table 3 were
06:04:40 22 approximately correct, where the -- I'm using the
06:04:47 23 word "approximate" only to refer to the
06:04:51 24 complications resulting from the overlapping
06:04:54 25 phenomena that I have testified about. And I

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06:04:58 1 would continue to base my opinions and conclusions
06:05:04 2 on the Table 3 numbers on that assumption.

06:05:10 3 Q. Okay. The Table 3 numbers, though,
06:05:17 4 are the -- I think we established the Table 3
06:05:19 5 numbers for 482.20 for unusual trading days
06:05:24 6 coincident with Ripple news and 29 cents for
06:05:30 7 regular trading days are from your Table 3. Is
06:05:37 8 that right?

06:05:37 9 MR. FIGEL: Objection.

06:05:37 10 A. There are certain inputs in
06:05:41 11 table -- I'm sorry, I may have missed the gist of
06:05:44 12 that question. But I think you were asking me,
06:05:48 13 did certain input numbers on LM-6 and/or LM-5 come
06:05:53 14 from Table 3?

06:05:57 15 Q. I was, but I was -- I thought your
06:06:00 16 answer to my hypothetical was, I wouldn't look at
06:06:06 17 LM-6, I would look at LM-4, which is your Table 3.
06:06:10 18 And I was just pointing out that it seems that to
06:06:13 19 supply at least certain of the numbers in LM-6,
06:06:16 20 you can look at LM-4 and identify those numbers.

06:06:21 21 MR. FIGEL: Objection.

06:06:27 22 A. The fact that someone else had
06:06:29 23 transcribed some numbers from my Table 3 into
06:06:32 24 their table and done some arithmetic with them is
06:06:38 25 immaterial to me. Any number of people can do any

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06:06:46 1 number of things with numbers from Table 3.

06:06:48 2 Table 3 is organized the way I
06:06:51 3 would organize these data. And I don't really
06:06:58 4 care what somebody else might -- how they might
06:07:00 5 rearrange the numbers. I would continue to base
06:07:04 6 my conclusions and opinion in this matter on
06:07:11 7 Table 3.

06:07:11 8 Q. Okay. Understood. But backing up
06:07:18 9 from what tables are in front of you, let's assume
06:07:22 10 the hypothetical case where, for a given period,
06:07:28 11 this 2,007-day period, the total returns for all
06:07:33 12 days are 92.55, and the total returns attributed
06:07:38 13 just to Ripple news events days are 139.95.
06:07:44 14 That's the hypothetical.

06:07:45 15 Does that affect your opinion at
06:07:47 16 all in this case?

06:07:48 17 MR. FIGEL: Objection.

06:07:49 18 A. No.

06:07:58 19 Q. Why not?

06:08:00 20 A. Because the total return for all
06:08:09 21 trading days of 92.95 -- 92.55 or whatever the
06:08:19 22 \$92 -- 92.55, describes a -- obscures a
06:08:32 23 complicated history of ups and downs, including an
06:08:38 24 up that went all the way to \$3.50 and then came
06:08:45 25 down again.

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06:08:52 1 Dr. [REDACTED] purports to draw
06:08:54 2 conclusions from a two-part procedure, one of
06:08:59 3 which involves three-day trading
06:09:05 4 windows -- trading day windows in which he
06:09:07 5 identifies a certain number of those snippets of
06:09:12 6 time as being unusual in the sense in which I have
06:09:18 7 identified that term with a -- defined that term
06:09:22 8 with a capital U.

06:09:24 9 And he labels certain other days as
06:09:30 10 being categorized as having -- being associated
06:09:36 11 with Ripple news events. He finds highly
06:09:40 12 statistically significant coincidences between the
06:09:48 13 trading day snippets and the news days.

06:09:53 14 \$95 versus \$136 are two average
06:09:59 15 statements about -- two statements about certain
06:10:05 16 averages that really have very -- have nothing to
06:10:10 17 do, that I recognize as I sit here, with the
06:10:18 18 substance of my commentary and set of conclusions
06:10:24 19 on Dr. [REDACTED] work, which is that he has identified
06:10:32 20 a highly statistically significant correlation of
06:10:37 21 Ripple news with a sliver of the days -- of the
06:10:49 22 trading day snippets that he has also identified
06:10:52 23 as ones potentially containing nonrandom
06:10:57 24 systematic effects of something.

06:11:04 25 The averages that you were asking

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06:11:06 1 me about just have next to nothing -- they have
06:11:11 2 nothing to do, that I recognize, with Dr. [REDACTED]
06:11:15 3 analysis in the first place.

06:11:21 4 With due respect, Mr. Sylvester,
06:11:23 5 you're off on a tangent, and on a very slender
06:11:26 6 limb of that tangent. And it has nothing to do,
06:11:31 7 that I recognize, with Dr. [REDACTED] purported
06:11:35 8 analysis or with my opinion that Dr. [REDACTED]
06:11:41 9 analysis, although it has identified a seemingly
06:11:46 10 highly statistically significant correlation, has
06:11:52 11 identified a correlation with only a sliver of the
06:11:58 12 event, the trading day snippets that he, that he
06:12:03 13 himself has identified as the candidates for
06:12:06 14 nonrandom systemic price effects.

06:12:10 15 Q. Is there any place in your report,
06:12:24 16 Dr. Marais, where you set forth the total
06:12:26 17 cumulative proceeds for the 2,007-day period in
06:12:32 18 [REDACTED] Model Number 5?

06:12:34 19 A. For the 2,007 days?

06:12:56 20 (Document review.)

06:12:56 21 I see that in -- I believe that
06:12:58 22 spot is visible in the counterpart of the
06:13:06 23 2,007-day number, if you just go to that same cell
06:13:09 24 in Table 3.

06:13:20 25 Q. I see. Is there any part of your

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06:13:22 1 expert report where you compare the total
06:13:25 2 cumulative proceeds attributable to Ripple news
06:13:32 3 days with the total cumulative proceeds for the
06:13:35 4 entire period?

06:13:36 5 A. I do not -- I could flip through my
06:13:51 6 report and see if I'm reminded of something.
06:13:55 7 Sitting here, without doing that, I don't recall
06:13:59 8 any place where I do that, because that is simply
06:14:03 9 not a comparison that is pertinent to what I do,
06:14:13 10 in fact, do, which I set forth again in a -- in a
06:14:18 11 longish answer about two minutes ago.

06:14:23 12 MR. SYLVESTER: I think we're very
06:14:24 13 close to the end. Can we just take five
06:14:26 14 minutes off the record to wrap up?

06:14:30 15 MR. FIGEL: Gladly.

06:14:34 16 MR. SYLVESTER: Off the record.

06:14:34 17 THE VIDEOGRAPHER: The time is
06:14:34 18 6:14 p.m. This concludes Media 6. Off the
06:14:34 19 record.

06:29:05 20 (Recess taken from 6:14 p.m. to
06:29:05 21 6:28 p.m.)

06:29:05 22 THE VIDEOGRAPHER: The time is now
06:29:05 23 6:28 p.m. This begins Media 7. On the
06:29:05 24 record.

06:29:05 25 BY MR. SYLVESTER:

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06:29:19 1 Q. Dr. Marais, turning to your Table 1
06:29:20 2 again in your expert report.

06:29:21 3 A. I'm there.

06:29:23 4 Q. Okay. There are 179 days that
06:29:24 5 correspond with unusual daily XRP returns and no
06:29:27 6 Ripple news events. Is that right?

06:29:29 7 A. Yes.

06:29:35 8 Q. Did you undertake any analysis to
06:29:38 9 determine what unaccounted for factors might have
06:29:41 10 driven unusual returns on those 179 days?

06:29:43 11 A. I did not. I did not need to do
06:29:48 12 that to arrive at the opinions I have in this
06:29:50 13 case.

06:29:50 14 Q. Did you undertake any analysis to
06:29:53 15 determine what unaccounted for factors might have
06:29:58 16 driven unusual returns on any days that were not
06:30:00 17 coincident with Ripple news days?

06:30:07 18 MR. FIGEL: Objection.

06:30:08 19 A. I -- as I have testified earlier
06:30:11 20 today, I did not undertake any brand new work
06:30:16 21 outside of what Dr. [REDACTED] reported and delivered.
06:30:21 22 Dr. [REDACTED], as far as I can tell, undertook no such
06:30:25 23 analysis. And I do point that out, but I did not
06:30:29 24 attempt to fill in that gap.

06:30:33 25 Q. Are you familiar with the concept

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06:30:35 1 of false positives in statistical tests?

06:30:41 2 A. Yes.

06:30:42 3 Q. Turning again to the 179 days, is
06:30:44 4 it possible that some of those days could be false
06:30:47 5 positives?

06:30:48 6 MR. FIGEL: Objection.

06:30:48 7 A. It is -- it is certainly possible
06:30:55 8 as it is possible that some of the four days
06:30:59 9 identified by Dr. [REDACTED] are false positives.

06:31:05 10 Q. What is a typical expectation, if
06:31:08 11 any, for false positive observations?

06:31:11 12 MR. FIGEL: Objection.

06:31:11 13 A. That they are flagged by a
06:31:21 14 statistical procedure as being significant such as
06:31:36 15 Dr. [REDACTED] procedure in this case.

06:31:40 16 Q. As the percentage --

06:31:43 17 A. And --

06:31:45 18 Q. Go ahead.

06:31:46 19 A. I'm sorry. But that, in reality,
06:31:49 20 they do not correspond to a nonrandom, systematic
06:31:59 21 effect of the kind that Dr. [REDACTED] refers to when he
06:32:05 22 describes his procedure for identifying them.

06:32:12 23 Q. Is the typical expectation in
06:32:16 24 percentage terms for false positives around 5 or
06:32:21 25 10 percent?

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06:32:21 1 A. It depends on the nature of the
06:32:25 2 data and on the nature of the procedure for
06:32:27 3 identifying them. I -- I would not say there is
06:32:31 4 such a thing as a typical rate of -- for -- that
06:32:38 5 fits all situations.

06:32:40 6 Q. I want to turn now to page 4 of
06:32:44 7 your report in which Dr. [REDACTED] Figure 1 is
06:32:50 8 reproduced.

06:33:06 9 A. I see it sitting right there.

06:33:09 10 Q. Okay. Is it fair to say that the
06:33:14 11 check-marks in Dr. [REDACTED] Figure 1 are intended to
06:33:20 12 indicate significance at the 5 percent level
06:33:24 13 according to Dr. [REDACTED]?

06:33:26 14 A. Yes.

06:33:27 15 Q. Okay. Do you dispute any of
06:33:30 16 Dr. [REDACTED] conclusions regarding statistical
06:33:33 17 significance as is indicated in his Figure 1?

06:33:36 18 A. I agree that the arithmetic that
06:33:45 19 Dr. [REDACTED] arrive -- performed to arrive at the
06:33:49 20 coloring of the cells and the check-marks in the
06:33:53 21 cells appears to me to be correct. In fact, I've
06:33:58 22 replicated it and I think he got the arithmetic
06:34:02 23 correct.

06:34:02 24 Q. And that includes his conclusions
06:34:07 25 regarding significance at the 5 percent level

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06:34:09 1 displayed in Figure 1?

06:34:12 2 A. Within the framework of
06:34:18 3 Mr. -- Dr. [REDACTED] analysis, I do agree that his
06:34:28 4 hypergeometric calculation, probability
06:34:32 5 calculations produced p-values below 5 percent --
06:34:37 6 actually, below 5 percent wherever he indicates
06:34:38 7 that he got such an outcome.

06:34:40 8 MR. SYLVESTER: I have nothing
06:34:41 9 further. Thank you very much for your time.
06:34:41 10 Reid?

06:34:48 11 MR. FIGEL: We don't have any
06:34:51 12 follow-up, obviously reserving all our rights
06:34:53 13 to check the transcript and to have him
06:34:55 14 consider some of the questions you asked.

06:34:57 15 But I think we need to ask the
06:34:59 16 Cleary folks and the Paul Weiss folks if they
06:35:03 17 have questions.

06:35:03 18 MR. SYLVESTER: Sure. Are they on?
06:35:06 19 Cleary? Paul Weiss?

06:35:06 20 MR. BONILLA LOPEZ: Nothing on my
06:35:09 21 end from Cleary.

06:35:11 22 MR. WARD: Nothing from Paul Weiss.
23 Thank you.

24 MR. SYLVESTER: Okay. Great.

25 Thank you very much, Dr. Marais.

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1 Appreciate your time.

2 THE WITNESS: Thank you.

3 CERTIFIED STENOGRAPHER: So would
4 counsel please state your orders for the
5 transcript on the record, please; if you
6 would like a rough draft and when you would
7 like the final.

06:35:26 8 I have SEC's order already.

06:35:33 9 MR. FIGEL: What are our choices?

06:35:35 10 Expedited.

06:35:37 11 CERTIFIED STENOGRAPHER: If you
06:35:37 12 would like a rough and when you would like
06:35:37 13 the final.

06:35:42 14 MR. FIGEL: How soon can we get the
06:35:42 15 final?

06:35:42 16 CERTIFIED STENOGRAPHER: Tomorrow?

06:35:42 17 (Continued on the next page.)

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06:35:42 1 MR. FIGEL: That's fine. We'll
06:35:44 2 just do that. You can skip the rough. Just
06:35:47 3 give us the final tomorrow. Thank you.

06:35:49 4 And I assume this is highly
06:35:51 5 confidential?

06:35:54 6 MR. SYLVESTER: It's up to you.

06:35:57 7 MR. FIGEL: Yeah, I think we should
06:35:57 8 keep it highly confidential. That's how his
06:35:59 9 report was designated and we agreed to that.
06:36:00 10 So let's keep the deposition consistent with
06:36:03 11 the report.

06:36:13 12 That's it for us.

06:36:13 13 THE VIDEOGRAPHER: The time is 6:35
14 p.m. This concludes Media 7 of 7 of today's
15 deposition. Off the record.

16 (Time noted: 6:35 p.m.)
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19
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CERTIFICATE OF WITNESS

I, M. LAURENTIUS MARAIS, do hereby declare under penalty of perjury that I have read the entire foregoing transcript of my deposition testimony, or the same has been read to me, and certify that it is a true, correct and complete transcript of my testimony given on December 21, 2021, save and except for changes and/or corrections, if any, as indicated by me on the attached Errata Sheet, with the understanding that I offer these changes and/or corrections as if still under oath.

_____ I have made corrections to my deposition.

_____ I have NOT made any changes to my deposition.

Signed: _____
M. LAURENTIUS MARAIS

Dated this _____ day of _____ of 20____.

C E R T I F I C A T E

STATE OF NEW YORK)

: ss.

COUNTY OF NASSAU)

I, PATRICIA A. BIDONDE, a Notary
Public within and for the State of New
York, do hereby certify:

That M. LAURENTIUS MARAIS, the
witness whose deposition is hereinbefore
set forth, was duly sworn by me, and
that such deposition is a true record of
the testimony given by the witness.

I further certify that I am not
related to any of the parties to this
action by blood or marriage, and that I
am in no way interested in the outcome
of this matter.

IN WITNESS WHEREOF, I have
hereunto set my hand this day,
December 22, 2021.

Patricia Bidonde

PATRICIA A. BIDONDE
Stenographer
Registered Professional Reporter
Realtime Certified Reporter

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1	E R R A T A				
2	ERRATA SHEET FOR THE TRANSCRIPT OF:				
3	Case Name:	SEC v Ripple			
4	Dep Date:	December 21, 2021			
5	Deponent:	M. Laurentius Marais			
6	Pg.	Ln.	Now Reads	Should Read	Reason
7	_____	_____	_____	_____	_____
8	_____	_____	_____	_____	_____
9	_____	_____	_____	_____	_____
10	_____	_____	_____	_____	_____
11	_____	_____	_____	_____	_____
12	_____	_____	_____	_____	_____
13	_____	_____	_____	_____	_____
14	_____	_____	_____	_____	_____
15	_____	_____	_____	_____	_____
16	_____	_____	_____	_____	_____
17	_____	_____	_____	_____	_____
18	_____	_____	_____	_____	_____
19	_____	_____	_____	_____	_____
20	_____	_____	_____	_____	_____
21	_____	_____	_____	_____	_____
22	_____	_____	_____	_____	_____
23	_____	_____	_____	_____	_____
24	_____	_____	_____	_____	_____
25	_____	_____	_____	_____	_____

HIGHLY CONFIDENTIAL

1	E R R A T A (Continued)				
2	Pg.	Ln.	Now Reads	Should Read	Reason
3	_____	_____	_____	_____	_____
4	_____	_____	_____	_____	_____
5	_____	_____	_____	_____	_____
6	_____	_____	_____	_____	_____
7	_____	_____	_____	_____	_____
8	_____	_____	_____	_____	_____
9	_____	_____	_____	_____	_____
10	_____	_____	_____	_____	_____
11	_____	_____	_____	_____	_____
12	_____	_____	_____	_____	_____
13	_____	_____	_____	_____	_____
14	_____	_____	_____	_____	_____
15	_____	_____	_____	_____	_____
16	_____	_____	_____	_____	_____
17	_____	_____	_____	_____	_____

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20 Date M. Laurentius Marais

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